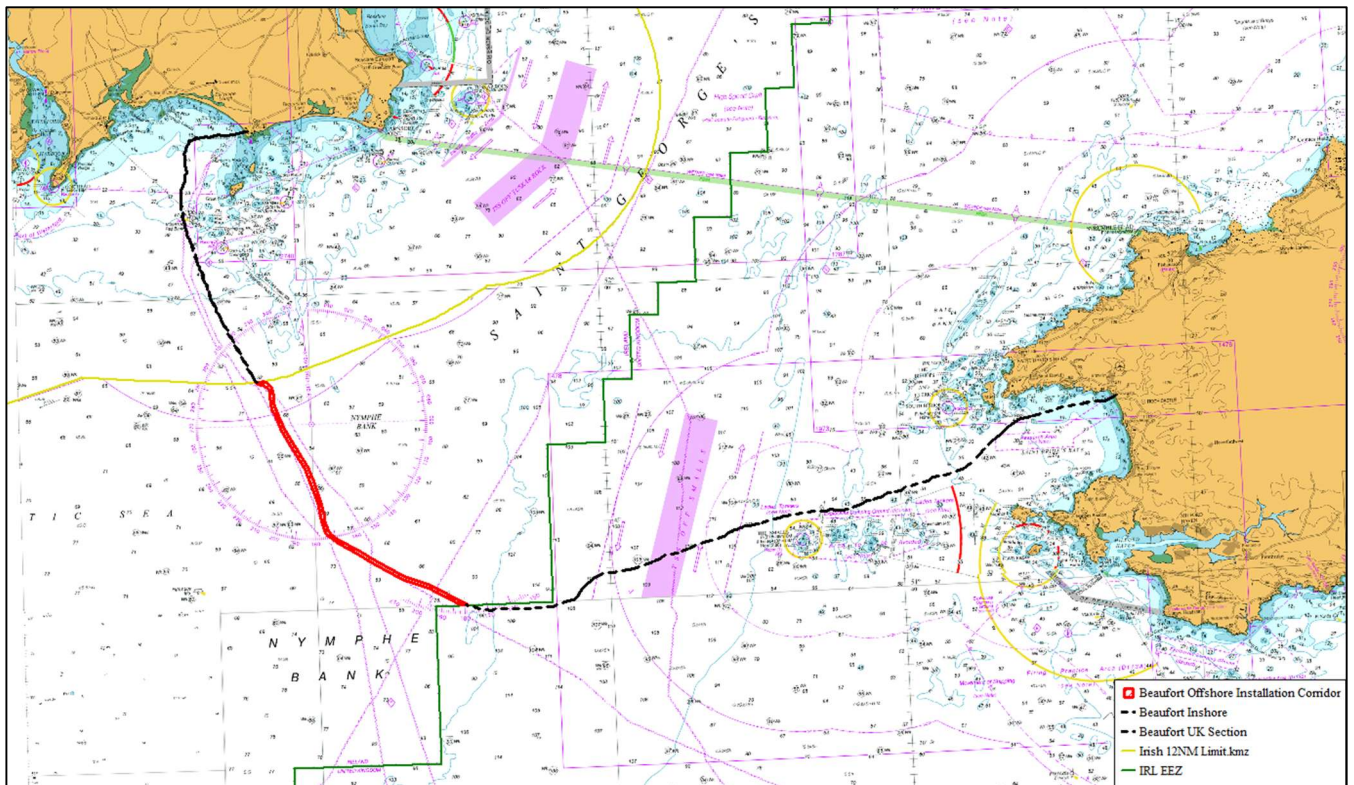


Natura Impact Statement – Information for a Stage 2 (Natura Impact Statement) AA for the Beaufort Subsea Fibre Optic Cable: Cable Installation Works from IRL 12nm to IRL EEZ Boundary.



31st March 2026

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1. Introduction

The following Natura Impact Statement (NIS) has been prepared by **Altamar Ltd.** for the Beaufort Subsea Fibre Optic Cable, specifically in relation to cable installation works from IRL 12nm Limit to IRL EEZ Boundary.

An Appropriate Assessment is an assessment of the potential effects of a proposed project or plan, on its own, or in combination with other plans or projects, on one or more European sites. European sites are those sites designated as Special Areas of Conservation (SAC) or Special Protection Areas (SPA). An AA Screening was carried out for the proposed project and concluded that *'Acting on a strictly precautionary basis, NIS is required in respect of the effects of the project on the Natura 2000 sites screened IN for NIS (potential disturbance effects in the absence of mitigation) because it cannot be excluded on the basis of best objective scientific information following screening, in the absence of control or mitigation measures that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.'*

An NIS or Stage 2 Appropriate Assessment is not required for the effects of the project on all other Natura sites because it can be excluded on the basis of the best objective scientific information following screening that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the European Site/s.

A Stage 2 AA is required for the proposed project.'

This Natura Impact Statement (NIS) examines whether the plan or project, either alone, or in combination with other plans and projects, in the view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European sites or species populations for which the site/s were designated.

1.1 Altamar Ltd.

Since its inception in 2001, Altamar has been delivering ecological and environmental services to a broad range of clients. Operational areas include: residential; infrastructural; renewable; oil & gas; private industry; Local Authorities; EC projects; and, State/semi-State Departments. Bryan Deegan, the managing director of Altamar, is an Environmental Scientist and Marine Biologist with over 30 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. He is currently contracted to Inland Fisheries Ireland as the sole "External Expert" to environmentally assess internal and external projects. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Bryan Deegan carried out all elements of this NIS. Bryan has been involved in twelve international sub marine fibre optic cable projects, many of which involved Horizontal Directional Drills within designated sites and all works required ecological supervision.

2. Background to the Appropriate Assessment

The Habitats Directive 92/43/EEC (together with the Birds Directive (2009/1477/EC)) forms the cornerstone of Europe's nature conservation policy. The Directive protects over 1000 animals and plant species and over 200 "habitat types" which are of European importance. In the Habitats Directive, Articles 3 to 9 provide the legislative means to protect habitats and species of European Community interest through the establishment and conservation of an EU-wide network of conservation sites (Natura, 2000). These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive), Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites. Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the [EUROPEAN] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the component national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

As outlined in "Managing European sites, The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC" (European Commission, 21 November 2018) *"The purpose of the appropriate assessment is to assess the implications of the plan or project in respect of the site's conservation objectives, either individually or in combination with other plans or projects. The conclusions should enable the competent authorities to ascertain whether the plan or project will adversely affect the integrity of the site concerned. The focus of the appropriate assessment is therefore specifically on the species and/or the habitats for which the European site is designated."*

As outlined in the EC guidance document on Article 6(4) (January 2007)¹:

"Appropriate assessments of the implications of the plan or project for the site concerned must precede its approval and take into account the cumulative effects which result from the combination of that plan or project with other plans or projects in view of the site's conservation objectives. This implies that all aspects of the plan or project which can, either individually or in combination with other plans or projects, affect those objectives must be identified in the light of the best scientific knowledge in the field."

Assessment procedures of plans or projects likely to affect European sites should guarantee full consideration of all elements contributing to the site integrity and to the overall coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation measures and residual impacts. These determine what has to be compensated, both in quality and quantity. Regardless of whether the provisions of Article 6(3) are delivered following existing environmental impact assessment procedures or other specific methods, it must be ensured that:

- *Article 6(3) assessment results allow full traceability of the decisions eventually made, including the selection of alternatives and any imperative reasons of overriding public interest.*
- *The assessment should include all elements contributing to the site's integrity and to the overall coherence of the network as defined in the site's conservation objectives and Standard Data Form, and be based on best available scientific knowledge in the field. The information required should be updated and could include the following issues:*
 - *Structure and function, and the respective role of the site's ecological assets;*
 - *Area, representativity and conservation status of the priority and nonpriority habitats in the site;*
 - *Population size, degree of isolation, ecotype, genetic pool, age class structure, and conservation status of species under Annex II of the Habitats Directive or Annex I of the Birds Directive present in the site;*

¹ European Commission. (2007). Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission;

- *Role of the site within the biographical region and in the coherence of the European network; and,*
- *Any other ecological assets and functions identified in the site.*
- *It should include a comprehensive identification of all the potential impacts of the plan or project likely to be significant on the site, taking into account cumulative impacts and other impacts likely to arise as a result of the combined action of the plan or project under assessment and other plans or projects.*
- *The assessment under Article 6(3) applies the best available techniques and methods, to estimate the extent of the effects of the plan or project on the biological integrity of the site(s) likely to be damaged.*
- *The assessment provides for the incorporation of the most effective mitigation measures into the plan or project concerned, in order to avoid, reduce or even cancel the negative impacts on the site.*
- *The characterisation of the biological integrity and the impact assessment should be based on the best possible indicators specific to the European assets which must also be useful to monitor the plan or project implementation."*

3. Stages of the Appropriate Assessment

This Appropriate Assessment screening was undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001), Part XAB of the Planning and Development Act 2000, as amended, in addition to the December 2009 publication from the Department of Environment, Heritage and Local Government; 'Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities' and the European Communities (Birds and Natural Habitats) Regulations 2011. In order to comply with the above Guidelines and legislation, the Appropriate Assessment process must be structured as follows:

1) Screening stage:

- Description of plan or project, and local site or plan area characteristics;
 - Identification of relevant European sites, and compilation of information on their qualifying interests and conservation objectives
 - Identification and description of individual in combination effects likely to result from the proposed project;
 - Assessment of the likely significance of the effects identified above. Exclusion of sites where it can be objectively concluded that there will be no likely significant effects; and,
- Conclusions

2) Appropriate Assessment (Natura Impact Statement):

- Description of the European sites that will be considered further;
- Identification and description of potential adverse impacts on the conservation objectives of these sites likely to occur from the project or plan; and,
- Mitigation Measures that will be implemented to avoid, reduce or remedy any such potential adverse impacts
- Assessment as to whether, following the implementation of the proposed mitigation measures, it can be concluded, beyond all reasonable scientific doubt, that there will be no adverse impact on the integrity of the relevant European Site in light of its conservation objectives"
- Conclusions.

If it can be demonstrated during the AA screening phase (Stage 1), that the proposed project will not have a significant effect, whether alone or in combination with other plans or projects, on the conservation objectives of a European site, then no further AA (Stage 2) will be required. It is important to note that there is a requirement to apply a precautionary approach to AA screening. Therefore, where effects are possible, certain or unknown at the screening stage, AA will be required.

In addition, it should be noted that Article 6(3) of the Habitats Directive must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an AA of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site.

4. Description of the Proposed Project

4.1 Management of the Site

The plan or project is not directly connected with, or necessary to the management of Natura 2000 sites.

4.2 Background

Amazon MCS Ireland Limited is applying to land the new high-capacity Beaufort submarine fibre-optic cable system in Kilmore Quay, Co. Wexford; linking Ireland to the UK. 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.

The existing subsea cable systems in the Celtic Sea linking Ireland and the UK are approaching end of life as they date from the year 2000 and earlier. More recent cable builds between Ireland and the UK have focused on routing directly into Dublin from the Northeast of England and Wales. The new Beaufort system will help ensure the long-term security of communications and resilient connectivity for Ireland and the UK. The system will make use of existing infrastructure such as ducts and the cable landing compound in Kilmore Quay. The system will land in the UK at a landfall in Newgale, Wales.

The Beaufort subsea cable is approximately 33mm in diameter and will be “un-repeated” (i.e. not powered). It is to be an industry-standard optical fibre cable. The cable will be double armoured in Irish waters.

Beaufort Cable System will re-use the existing ESAT-1 landfall infrastructure at Ballyteige Burrow to the northwest of Kilmore Quay. This includes the duct to sea beneath the dune system, the Beach Manhole, the fronthaul duct from the Beach Manhole to the Cable Landing Station and the Cable Landing Station.

Overall Route

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.

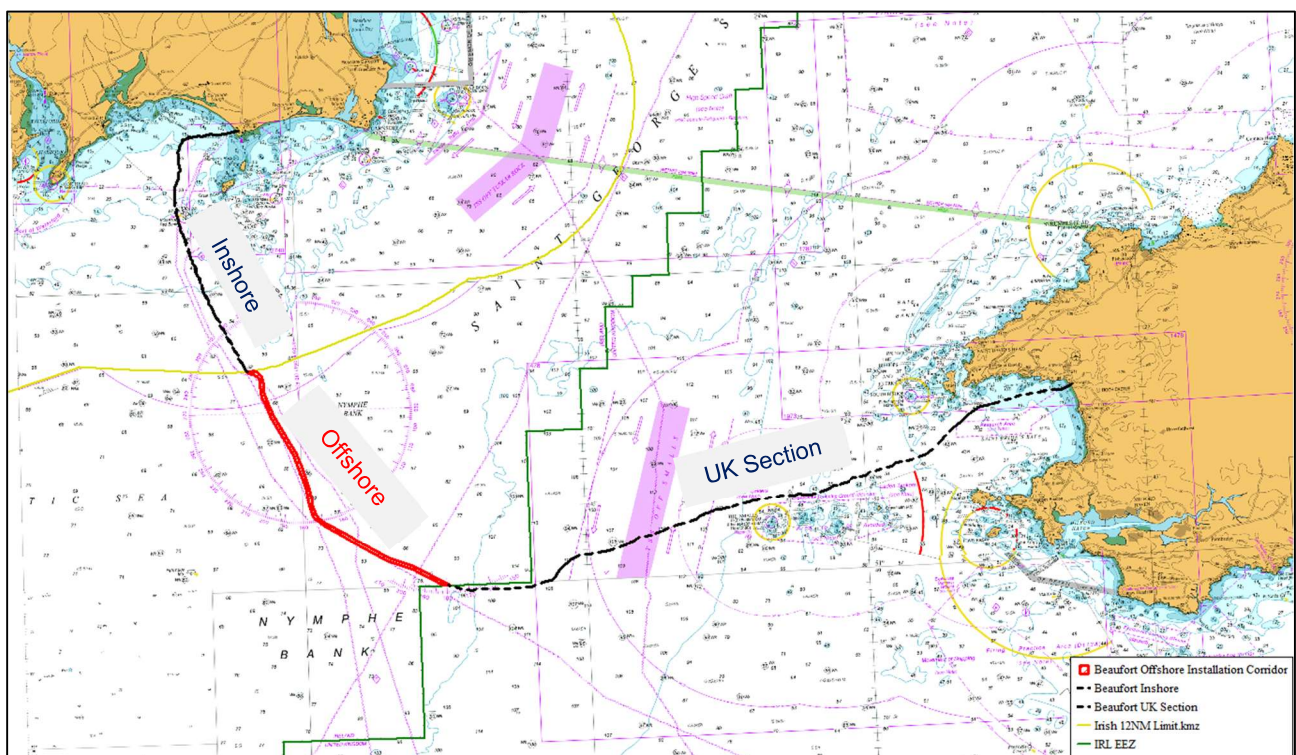


Figure 1. Beaufort Cable System (Source: MDM)

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 – This segment will be the primary focus of this report.
UK Section:	EEZ Boundary to Newgale - This segment is pending decision by UK authorities (application ref. CML2606).

Several cable systems linking Ireland and the UK have been constructed in the Celtic Sea in the past 25 years and these are shown in Figure 2. These cables include:

- | | | |
|-----------------------|-----------------------------|------|
| • Celtic | Kilmore Quay to Land's End | 1994 |
| • ESAT-1 | Kilmore Quay to Land's End | 1998 |
| • UK - IRL Crossing 1 | Kilmore Quay to Land's End | 1999 |
| • UK - IRL Crossing 2 | Ballinesker to Bude | 1999 |
| • Solas | Kilmore Quay to South Wales | 2000 |

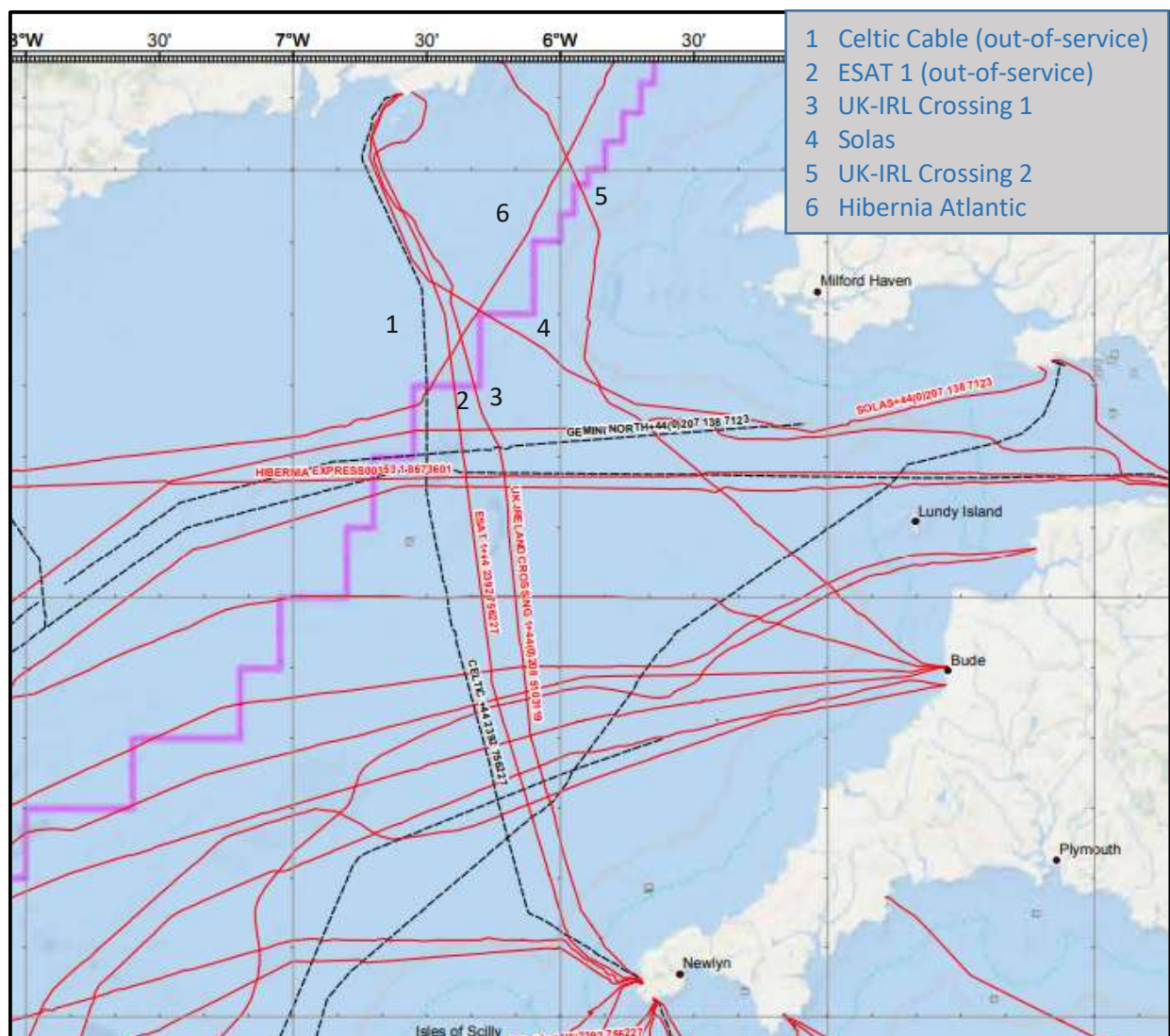


Figure 2. Existing Cable Systems (Source: MDM)

Celtic is an old Telecom Eireann / BT cable and has been taken out of service. ESAT-1 was installed in 1998 and has recently been taken out of service. UK-IRL Crossing 1 and UK-IRL Crossing 2 were both installed in 1999 and are relatively old in cable terms. Solas and Hibernia Atlantic installed in 2000 and 2001 respectively are also ageing cables.

The status of these existing cables leaves Ireland largely reliant on the subsea cables in the Dublin - Lancashire/Anglesey sector of the Irish Sea. This, together with increasing requirements for robustness, security, and resilience in overall network systems, establishes a need for a new and diverse cable system. The planned Beaufort Cable System is being developed to replace an out-of-service cable and upgrade the connectivity in the southern sea corridor from Ireland to the UK.

Significant turning points in the offshore section are listed as follows:

Irish 12 Mile Limit	KP – 39.3
Turning Point	KP – 60.0
Greenlink Interconnector Crossing:	KP – 58.8
EEZ Boundary	KP – 78.1

The overall route configuration is presented on an Admiralty Chart base map in Figure 3.

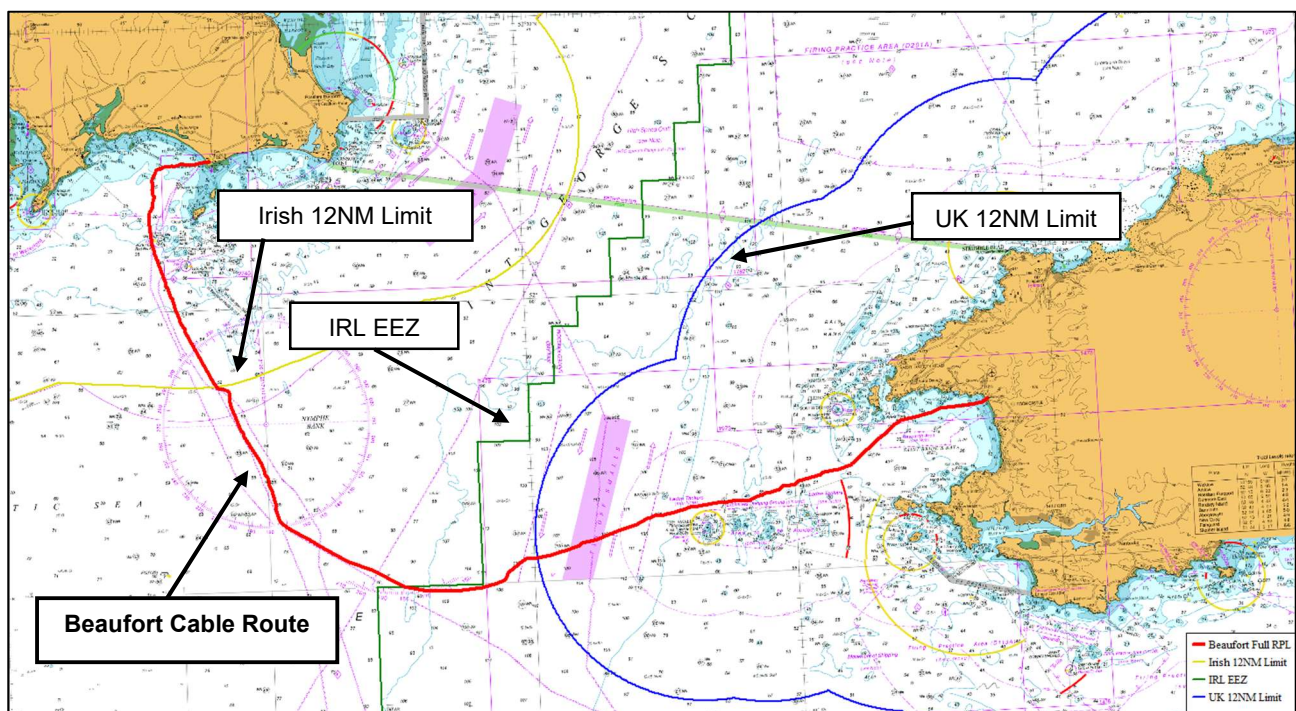


Figure 3. The Planned Beaufort Cable System Route (Source: MDM)

The Route Position List (RPL) corresponding to installation corridor of the Offshore Section of Beaufort (between the Irish 12nm limit to the EEZ boundary) is presented in Table 1. This corridor is 400m wide, 38.5 km in length and has a total area of approximately 15.38 km².

Table 1. 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	
	51° 53' 45.5170" N	6° 34' 01.9208" W	IRL – UK Crossing 1
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	
	51° 45' 20.6984" N	6° 29' 02.1085" W	Greenlink Interconnector
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	
	51° 43' 04.2921" N	6° 24' 24.1696" W	IRL – UK Crossing 1
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	
	51° 40' 59.1939" N	6° 17' 47.6817" W	Hibernia Atlantic Crossing
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	

Table 1. Beaufort IRL Offshore Installation Corridor RPL			
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	

A MAC (ref: MAC240030) has been granted by the Maritime Area Regulatory Authority for the cable segment from IRL 12nm to IRL EEZ.

Provisional Timeline

The provisional timeline for the project is as follows:

Main-Lay

Q2/Q3 2027

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 4.

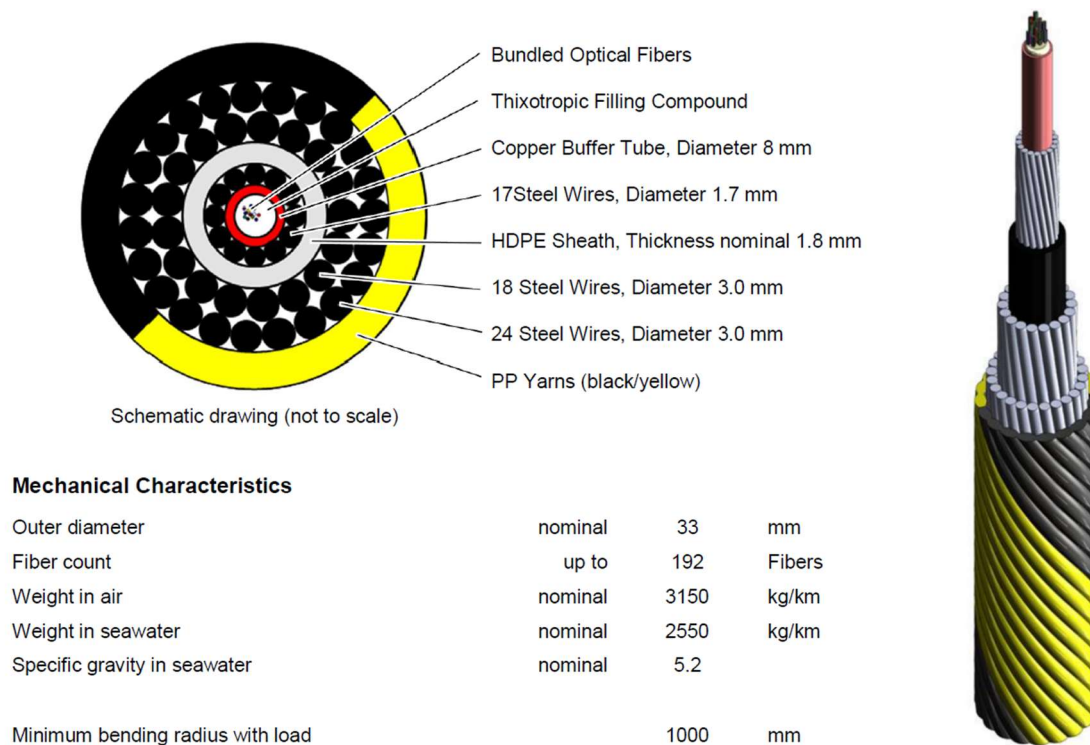


Figure 4. NSW MINISUB DA 192 Specification (Source: MDM)

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.

4.2.1 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 2 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 2: Subsea Crossings

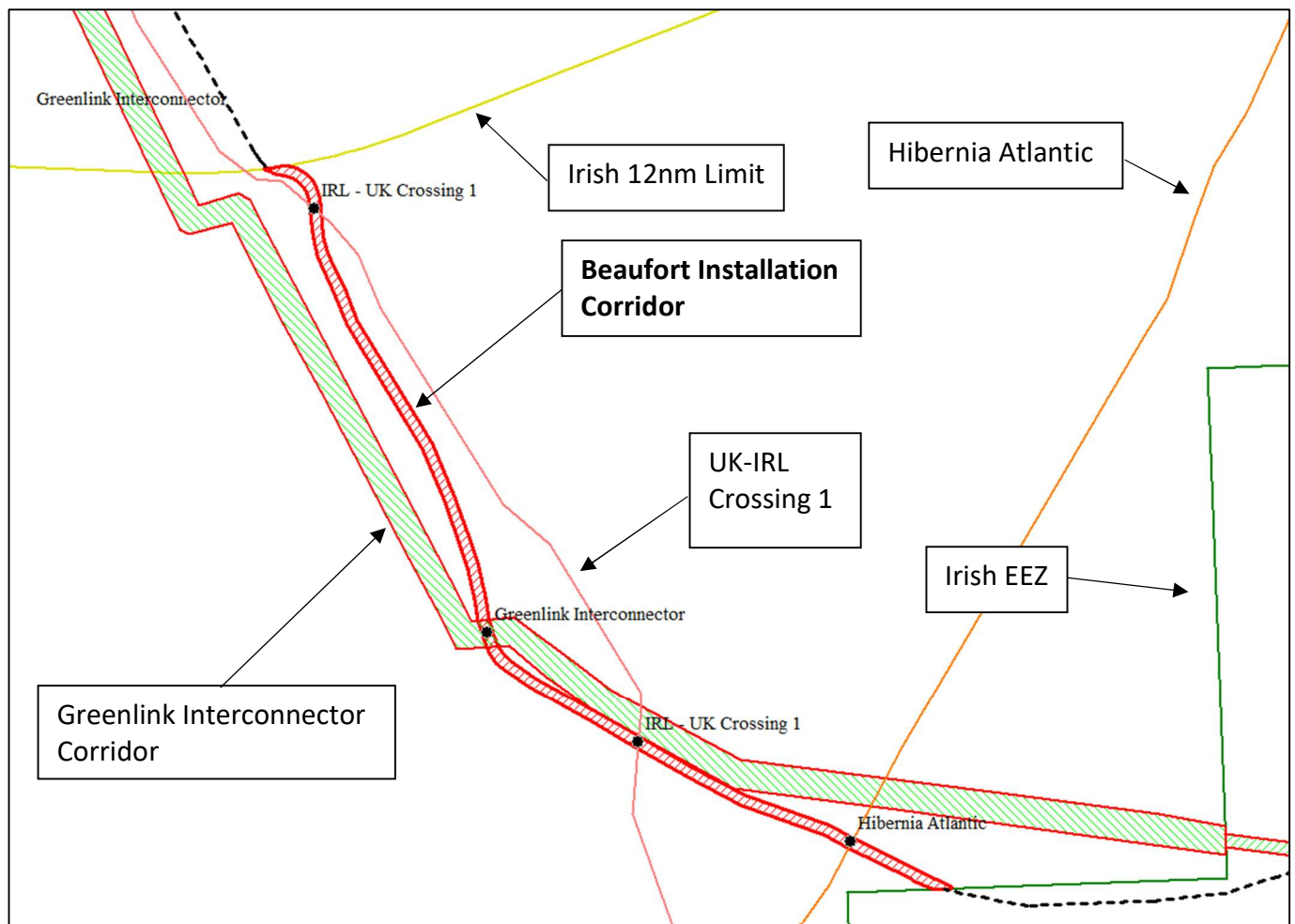


Figure 5: Beaufort Subsea Crossings

In-Service Telecoms Cables

As highlighted in Table 2, 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 as illustrated in Figure 6 below. 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.

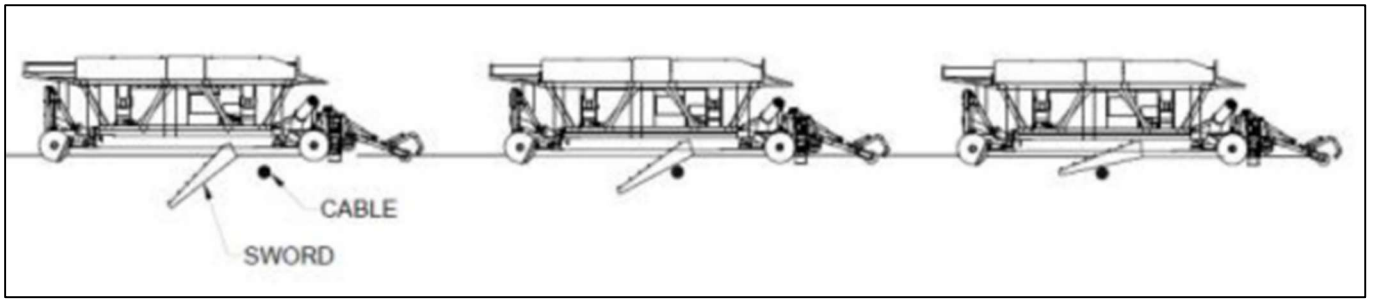


Figure 6: CAPJET in Free Floating Mode when Crossing a Cable

OOS Telecoms Cables

The Beaufort cable will not cross any out of service (OOS) cables between the Irish 12nm limit and the EEZ boundary.

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 5). As shown in Table 1, The Beaufort cable route will cross the Greenlink Interconnector at: $51^{\circ}45'20.6984''N$, $6^{\circ}29'02.1085''W$.

The preliminary crossing design for the Greenlink Interconnector intends to use the same Uraduct crossing cable protection and design as used in in-service telecom 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 7) 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 (Figure 7). 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 7: 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 will be a product such as Uraduct, which is a specialized polyurethane ducting designed to wrap around the cable thus minimizing abrasion
- 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.
- It may also be required to install additional protection on the Beaufort cable at the Greenlink crossing. If required, This protection would likely be a product such as Uraduct, which is specialized polyurethane ducting designed to wrap around the cable thus minimizing abrasion.

4.2.2 Cable Installation

The principal objective of the main lay installation works is to successfully deploy the fibre optic cable along the proposed route, obtaining the required burial depth to protect the system from external aggression and provide for a safe and secure system, with due regard for environmental, archaeological and ecological considerations.

Subsea Cable Installation

The Beaufort Cable System will feature a direct landing at Kilmore Quay. The Main Lay Vessel will bring the cable toward the shoreline until reaching the designated landing point. An inshore installation team will be in place to bring the cable ashore. Once the cable is securely landed, the required termination and testing activities will be completed onshore. The Main Lay Vessel will then proceed to deploy and bury the cable in the seabed. The burial tool is operated from and powered by the Main Lay Vessel and is designed to bury the cable at a depth such that the cable will be secure from fishing activities. The target burial depth of 1.5m is subject to reasonable endeavours and where the seabed geology allows.

Typical burial speed is generally of the order of 0.5 knots and is dependent on the stiffness of the seabed sediment. There is no significant noise generation during burial operations. Cable installation produces only

a minor plume of suspension of seabed sediments in the water column, and this is transient and localised due to the nature of the burial and natural backfill activities.

Typical subsea cable burial tools used to simultaneously install and bury fibre optic cables in the seabed include cable plough (passive and jet assisted) or jetting trenchers (sled or self-propelled). The Nexans CAPJET jetting trencher will be deployed for the installation of the Beaufort cable system.

The Nexans CAPJET system is a remotely operated jetting trencher developed to bury subsea cables and pipelines into the seabed. It uses high-pressure focussed water jets to fluidize the sediment beneath the cable or pipeline, allowing it to settle into a trench without mechanical cutting. The CAPJET is capable of:

- Trenching to depths of up to 3 m, depending on soil conditions.
- Operating in waters up to 2,000 m deep.
- Performing in a variety of seabed types, from soft sediment to harder soils, with adjustable jet pressure (10–16 bar) and thrust.

It integrates multiple sensors (video cameras, sonar, gyros, pressure sensors) for precise control and real-time monitoring. The system's modular design enables different trenching configurations — for flexible pipelines, steel flowlines, and cable burial.

In the context of this project the CAPJET will be used to simultaneously lay and bury the Beaufort cable by forming a narrow trench (approx. 150mm) of fluidised seabed using a bespoke jetting sword into which the cable is installed to the target depth through the cable depressor. The seabed sediment is displaced temporarily to form the trench during the burial operation and then allowed to re-form naturally and 'backfill' the trench after the passage of the jetting tool. The CAPJET will be powered and controlled from the cable installation vessel via electrical umbilical. A visual representation of the CAPJET system is shown in Figure 8.

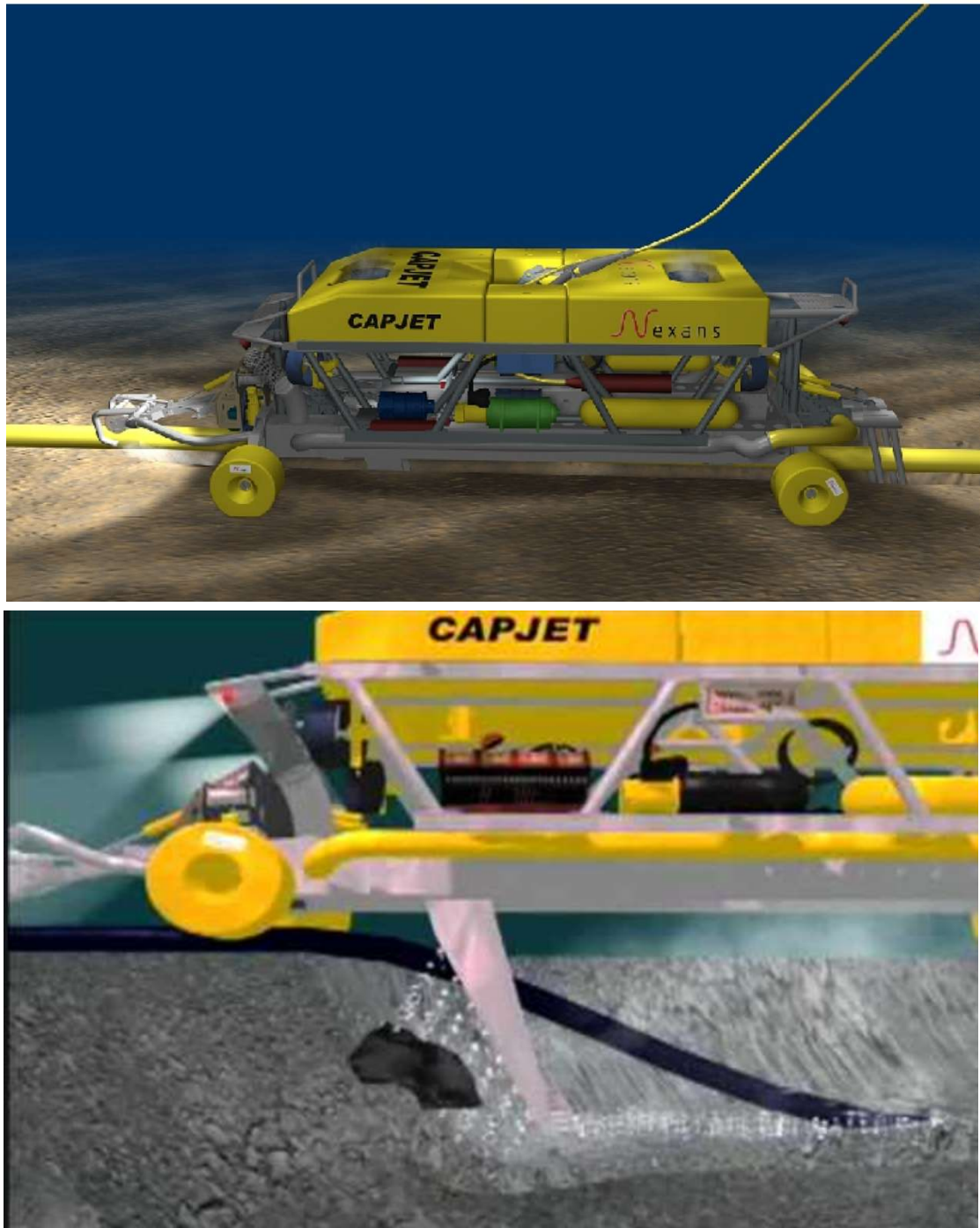


Figure 8: Nexans CAPJET Burial Tool

The target burial depth for the Beaufort cable system is 1.5 metres. In areas of stiff soil, the actual burial depth may be reduced but is planned to be still at a depth which will protect the cable from fishing operations and generally not less than 1 metre. Where seabed geology prevents burial such as areas of rock or reef, the cable will be directly laid on the seabed surface.

Post Lay Operations

Following main lay operations, post-lay inspection and burial (PLIB) may be carried out in certain areas to inspect the proper laying and burial of the cable in the seabed. A post-lay burial operation may be performed in order to supplement the burial operations in the following instances:

- Planned recoveries of the burial tool.
- Initial and final splice positions within the buried sections – Post-Lay Inspection and Burial is planned for the initial splice location between the Pre-Lay Shore End and main lay section of the cable to 1.5 metre target burial depth.
- Unplanned recoveries due to burial tool breakdown, adverse weather , etc.
- Surface-laid sections due to burial tool malfunction where the burial tool is not brought back on board.

In limited areas requiring post-lay burial, the CAPJET system is also utilized. As described previously, the CAPJET uses a jetting burial tool to bury the cable to the required depth. The seabed is emulsified using high-pressure focussed water jets in the localised region of the burial, and a narrow trench is formed. The CAPJET system slowly moves along the seabed on the required cable track forming a narrow trench into which the cable is placed. The seabed sediment is displaced temporarily to form the trench during the burial operation and then allowed to re-form naturally and ‘backfill’ the trench after the passage of the CAPJET’s burial tool.

It should be noted that the surrounding seawater is used for the jetting system, i.e. nothing alien is introduced into the environment. The burial tool does not remove any seabed materials from the area. The CAPJET burial operation is controlled from the main vessel and monitored in real time using high-definition video cameras and imaging sonar mounted on the vehicle.

Post-Lay Greenlink HVDC Interconnector Crossing Operations

If required, the Greenlink HVDC Interconnector crossing will be inspected following the 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.

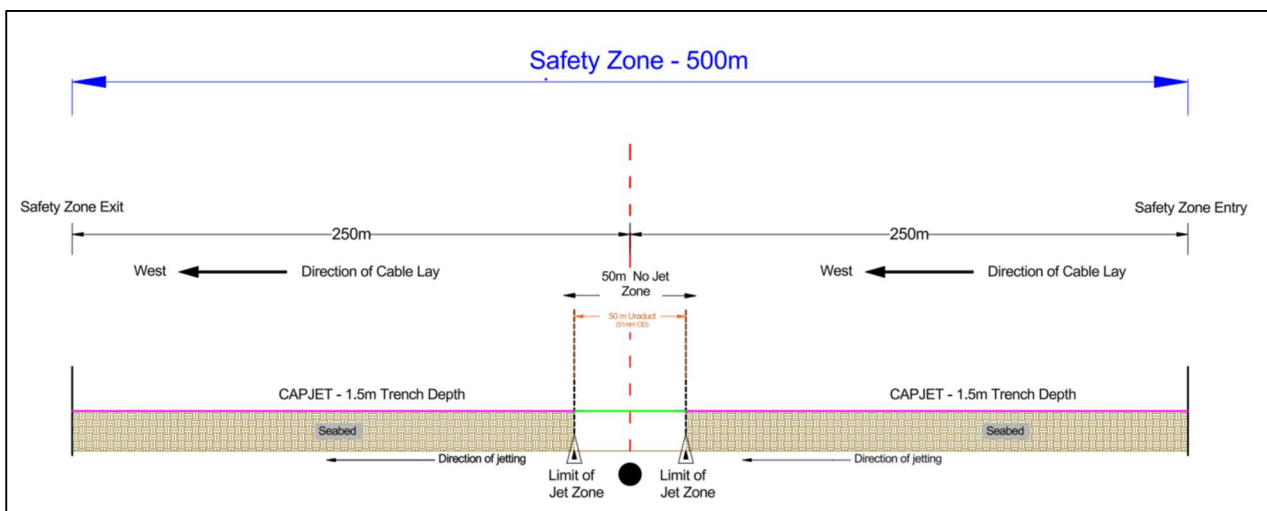


Figure 9: Greenlink HVDC Interconnector Crossing Safety Zone

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.

If required, 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). (Figures 10-13).

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 463m² (including sloped sides) with a total volume of rock of approximately 220m³, 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:

- i. The rock material will be loaded and positioned on the vessel in accordance with its grading and characteristics.
- ii. The vessel hopper will be loaded with the rock.
- iii. The vessel will transit to the crossing location, and the flexible fall pipe will be deployed.
- iv. The vessel will take position over the crossing point and hold position using its Dynamic Positioning (DP) systems.
- v. 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 10).
- vi. The crossing will be surveyed by the observation ROV and, if successfully completed, the fall pipe will be recovered.

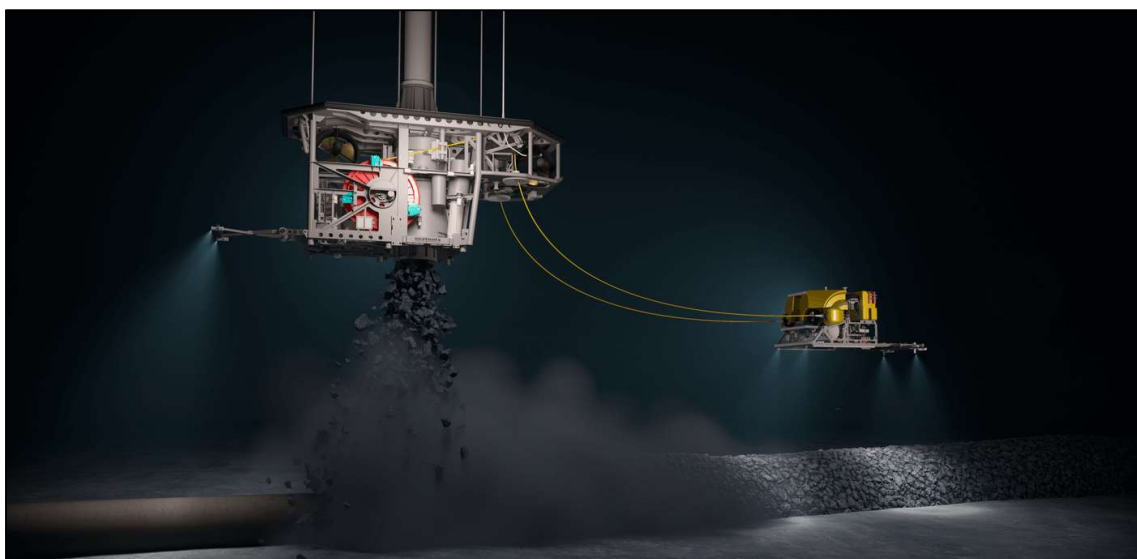


Figure 10: Fall Pipe Discharging Rock

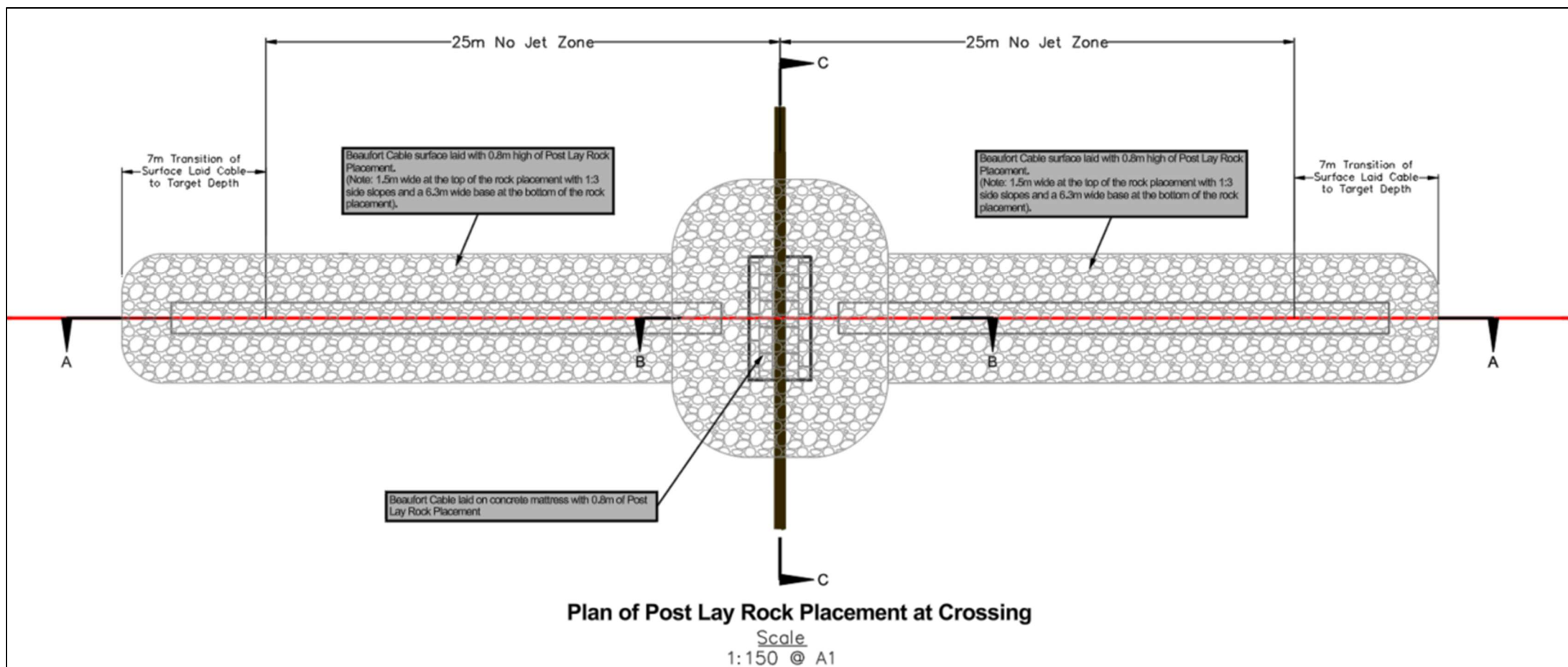


Figure 11: Plan View of Post Lay Rock Berm

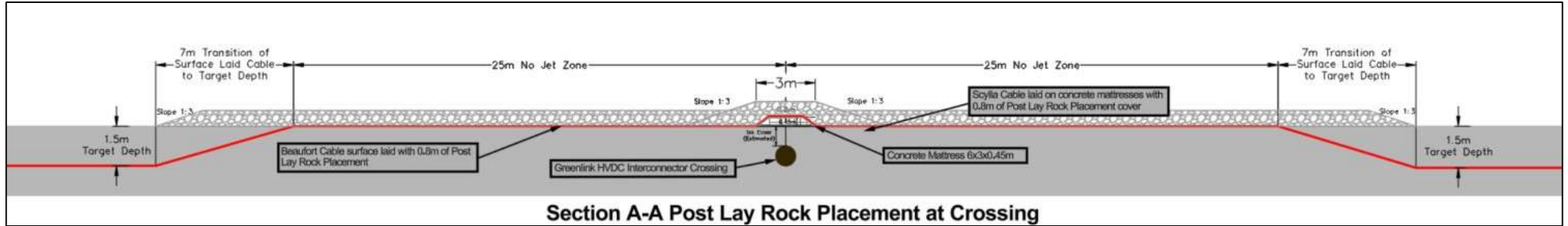


Figure 12: Cross Section A-A of Post Lay Rock Berm

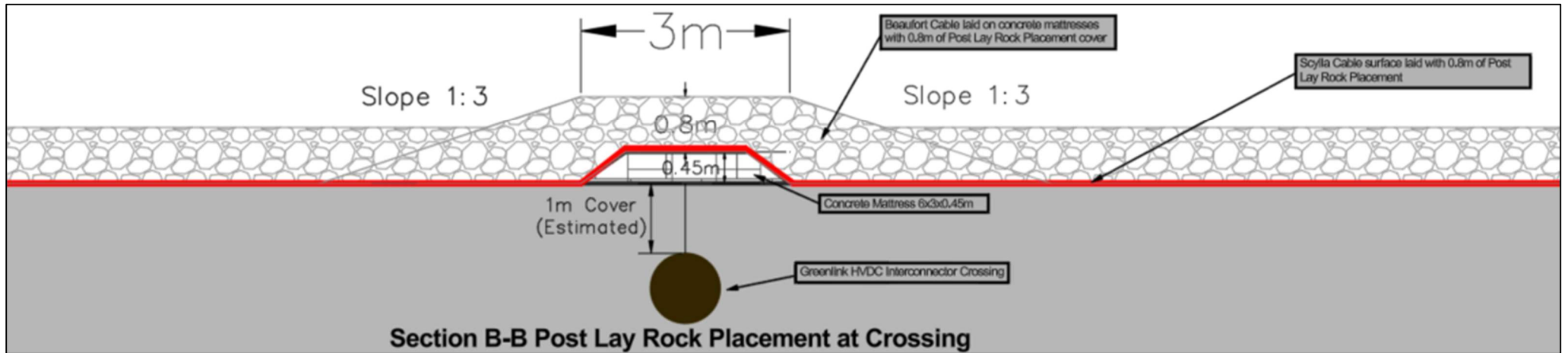


Figure 13: Cross Section B-B of Post Lay Rock Berm

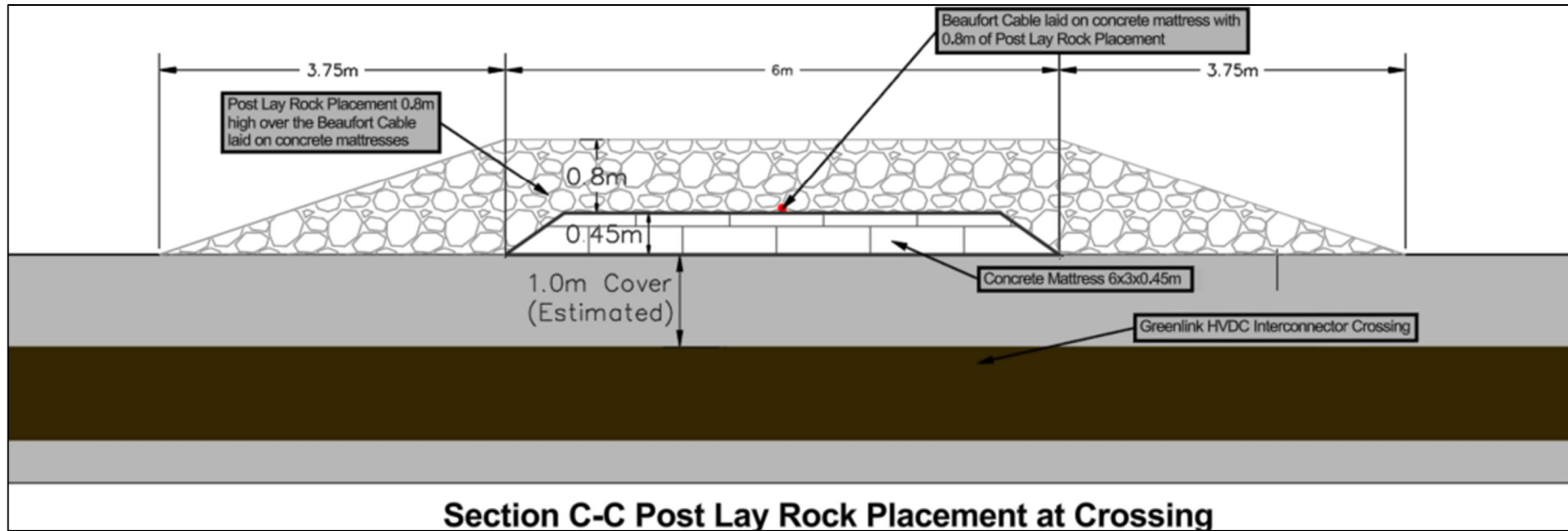


Figure 14: Cross Section C-C of Post Lay Rock Berm

Ultra-Short Baseline (USBL) Subsea Positioning

An Ultra-Short Baseline (USBL) is a subsea positioning system widely used by the offshore marine industry and scientific research vessels to accurately track the position of towed equipment and sensors. The USBL system consists of a transceiver mounted to the cable vessel, and transponders on the towed burial tool.

To calculate a subsea position, the USBL calculates both a range and an angle from the transceiver to the subsea beacon. Angles are measured by the transceiver, which contains an array of transducers. The transceiver emits an acoustic signal at predetermined periods (often 0.5 seconds) which is returned by the transponder and allows for the bearing and distance to be calculated.

USBL systems are designed for close range transmission and thus typically emit pulses of medium frequency sound (20 to 50 kHz). Manufacturers report SPL values of 194 to 207dB re 1 μ Pa at 1m depending on the model used, taking as an example the higher range of USBL source (Kongsberg HiPAP) with a SPL of 207dB re 1 μ Pa at 1m.

All works that involve the use of acoustic instrumentation such as the USBL will follow the Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (Department of Arts, Heritage and Gaeltacht, 2014).

4.2.3 Cable Installation Vessel

The main lay installation vessel will consist of a dedicated marine spread which will be suitable for the scope of work required, the water depth and the anticipated seabed conditions of the cable route. The Cecon CLV will be used to carry out the installation works. It is a newly built vessel and is 100m in length, 21m in breadth and can accommodate 100 personnel (consisting of the ship's crew, cable installation personnel and client representatives). A visual representation of the Cecon CLV is shown below.



Figure 15: Cecon CLV

Appointed contractors will be required to comply with all legislation relevant to the activities within their scope of work. Prior to installation works taking place, both Project Supervisor for Design Process (PSDP) and Project Supervisor for Construction Stage (PSCS) will be appointed under the relevant legislation and project specific HSE plans will be put in place which will form part of the project execution plans.

Cable installation vessels will generate some subsea noise in the marine environment from engine noise and dynamic positioning thrusters. Shipping noise is typically within the 50-300 Hz frequency band and is the dominant noise source in deeper water (DECC, 2011). Propellers on vessels all have the potential to produce cavitation noise. This sound is caused by vacuum bubbles that were generated by the collapse of bubbles created by the spinning of the propellers.

Acoustic broadband source pressure levels typically increase with increasing vessel size, with smaller vessels (<50 m) having source pressure levels 160-175 dB (re 1µPa at 1m), medium size vessel (50-100 m) 165-180 dB (re 1µPa at 1m) and large vessels (>100 m) 180-190 dB (re 1µPa at 1m) (DECC, 2011). Every vessel has a unique noise signature and for each vessel this can change in response to several factors, including ship speed, operational status, vessel load, the condition of the vessel and even the properties of the water that the vessel is operating in.

4.2.4 Timeline and Duration of Cable Lay Activities

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.

4.2.5 Decommissioning

Once the cable system is designated 'out of service', a decision will be made to decommission the cable. Reasonable endeavours will be made to remove the cable. In the first instance, winching and vessel pull will be employed to pull the cable from the seabed. If this is not successful and if there is a risk of breaking the cable a jetting tool may be employed to fluidise the seabed and aid recovery. Winching is expected to be effective for recovery where the cable burial is less than 1.5m and depending on the stiffness of the seabed. Use of a jetting tool in soft (sandy) sediments may allow successful recovery where the burial is buried up to 1.5m. If the cable is buried greater than such depths or in stiff sediments it may not be feasible to recover, with the cable breaking before it can be recovered. In such cases there may be no alternative but to leave the cable in-situ with any exposed cable ends secured on the seabed with clump weights in accordance with *ICPC Recommendation 1* and the location will be recorded in the decommissioning file.

4.3 Spatial Scope and Zone of Influence

As outlined in Office of the Planning Regulator (2021) *“The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source- Pathway-Receptor framework and not by arbitrary distances (such as 15 km).”* IEEM (2006) defined the zone of influence as *“the areas/resources that may be affected by the biophysical changes caused by activities associated with a project”*. In order to define the extent of the study area for ecological assessment, all elements of the project were assessed and reviewed in order to identify the spatial scale at which ecological features could be impacted. Due to the limited temporal and geographical scale of the project and the use of Best Available Techniques (BAT), the slow speed of the cable lay (0.5kn), it is considered that the potential impacts of the proposed Beaufort Offshore (12nm-Irish EEZ) Cable works could only extend beyond 500 m of the subtidal elements of the project due to noise generation and potential disturbance of sediment. However, as outlined in IEEM (2010) *“in the marine environment it is more difficult to define the geographical framework precisely and to accommodate all factors that should influence the definition of value, e.g. size or conservation status of populations or the quality of habitats.”* As a result, *“it is very unlikely that the impacts on integrity can be evaluated without considering functions and processes acting outside the site’s formal boundary.”* It is important to note that unlike other maritime operations during main lay cable installation works, the installation vessel speed will be very slow (0.5 knots). In light of this, and based on the localised nature of the cable laying impacts (including maintenance and decommissioning works), the Zone of Influence in the subtidal was extended to 2 km either side of the cable route to take into account localised resuspension due to cable laying activity. It should be noted that the noise generated from the vessel laying activity is relatively minor, similar in nature to trawling activity. The proposed project is for main lay operations and not marine survey. However, despite the lack of extensive underwater acoustics that would be used in a traditional marine survey, the project has the potential to introduce noise into the marine environment particularly through the use of a USBL (Ultra Short Baseline) equipment used to locate underwater equipment e.g. plough and ROV’s etc. which may extend the effects of the project beyond 2km.

4.3.1 Marine Mammals

Seals and Cetaceans

As outlined in NPWS² *“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.

In Ireland, the 1992 EC Habitats Directive as transposed by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) requires that both seal species and all cetaceans occurring in Ireland are maintained at favourable conservation status. Under Article 12 of the Directive, all cetaceans should receive strict protection within the Exclusive Economic Zone. Under Article 4 of the Directive, Special Areas of Conservation (SACs) must be proposed for the following species:”

² <https://www.npws.ie/marine/marine-species>

- Bottlenose Dolphin
- Harbour Porpoise
- Common Seal
- Grey Seal

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) methodology³. 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). As there is the potential for grey seal, harbour seal, harbour porpoise and common bottlenose dolphin (highly mobile marine mammal species) to enter the proposed Beaufort Offshore Cable route, the ZoI of the proposed project has been extended to include Natura 2000 sites (designated for these species) within the relevant foraging range / MU of these species.

Otter

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 ± 1.5 km in length along a riverine environment and 6.5 ± 1.0 km in coastal environments, while male otter territory along rivers is approximately 13.2 ± 5.3 km 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.

4.3.2 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). The recorded areas of salmon migration are demonstrated in Figure A.1 in Appendix I.

Twaite Shad is a rare red listed (vulnerable) species that have an affinity for coastal habitats (Maitland & Hatton-Ellis, 2003), with recent studies recording movement of this species up to 950km from the River Severn with one individual detected in the Blackwater Estuary (Davies *et al.*, 2020). However, based on King *et al.* (2011) The twaite shad is restricted to the lower reaches of a handful of rivers in the south, with evidence of recruitment only from the Barrow, Suir and Munster Blackwater. The primary conservation objectives for Natura 2000 sites along the south coast of Ireland for which Twaite Shad are a designated Qualifying Interest (Slaney River Valley SAC [000781]; River Barrow and River Nore SAC [002162]; Lower River Suir SAC [002137]; Blackwater River (Cork/Waterford) SAC [002170]) relate to the restoration of freshwater habitats for this species. The proposed works are located within the offshore

³ <https://data.jncc.gov.uk/data/b48b8332-349f-4358-b080-b4506384f4f7/jncc-report-734.pdf>

subtidal (12nm – Irish EEZ Boundary) in an area of existing vessel and trawling activity. In the unlikely event that Twaite Shad may be present along the proposed Beaufort Offshore Cable Route, vessel speeds will be slow (0.5 knots) and operations are on a continual basis, therefore, the vessel and equipment would be easily avoided by this species if encountered. The proposed works will be isolated to the route corridor and will not impact on spawning grounds or migratory routes of this species.

Similarly, no likely significant effects on lamprey species are foreseen as a result of the proposed project. As outlined in King *et al.* 2011 *'juvenile river/brook lamprey (the two species are indistinguishable at juvenile stage) are widely distributed in catchments where suitable habitat is available and, on this basis, both river and brook lamprey have now been classified as of 'least concern'. The same survey programmes have also demonstrated that sea lamprey can be found in many of our larger river systems. However, these surveys have shown that sea lampreys are normally scarce, with low densities of juveniles where they do occur and a tendency for migrating adult fish to be concentrated downstream of major weirs in rivers. This species is now listed as Near Threatened.'* At sea, sea lamprey are widely dispersed and their movements are largely dictated by their host fish (Igoe *et al.*, 2004). Within the marine environment, river lamprey inhabit estuarine and coastal waters (Igoe *et al.*, 2004).

Given the spatial and temporal nature of the proposed works (isolated to the works corridor within the offshore subtidal 12nm-EEZ), and given the minimum distance to Natura 2000 sites designated for sea and river lamprey (38.2 km to River Barrow and River Nore SAC), no likely significant effects on sea lamprey distribution or spawning habitats are foreseen as a result of the proposed project.

4.3.3 Birds

The marine waters off the coast of County Wexford mark the boundary between the Irish and Celtic Seas. These waters constitute a valuable feeding resource for the seabirds that return every spring to Wexford's coastal and island colonies to breed. Outside of the summer months these relatively shallow coastal waters provide safe feeding and roosting opportunities for a range of marine birds overwintering here or on passage (NPWS, 2024). The proposed Beaufort Offshore Cable Route is located within the offshore subtidal (12nm-EEZ Boundary), proximate to Wexford's coastal waters. Given the location of the proposed works to these valuable waters, and given the potential for seabirds to utilise offshore waters within the proposed works corridor for transiting / feeding, the ZOI has been extended to include Natura 2000 Sites designated for seabirds which utilise this area; namely, Seas Off Wexford SPA and Saltee Islands SPA.

4.4 Identification of Relevant Natura 2000 Sites

4.4.1 Management of the Site

The proposed works are not directly connected with, or necessary to, the management of Natura 2000 sites.

4.4.2 Relevant Natura 2000 Sites to the Proposed Project

Works proposed as part of the Beaufort Offshore Cable are solely within the marine Irish EEZ Subtidal, outside of the inshore 12nm limit. No landfall works are proposed as part of this application. Detailed design following survey has resulted in the selection of an optimal route for burial. This has included discussions with Altamer in relation to sensitive habitats. As demonstrated in Figures 24-27, the proposed burial works are predominantly located in areas consisting of coarse sediment and sand. This route selection has been designed to avoid sensitive habitats and minimise potential environmental impacts. As evident in the data gathered from INFOMAR, the MSFD, and EUSeaMap (2025), the offshore Beaufort cable route does not pass through any areas containing rock or biogenic reef. As a result, and given the minimum distance of this cable route to the nearest SAC containing Reefs [1170] as a qualifying interest (16.5km to Saltee Islands SAC), no significant effects on reef habitats as a result of the proposed development are likely in the absence of mitigation. As seen in Figure 25 (Infomar backscatter) the proposed route runs parallel to the main sand waves utilising a troughs for optimal burial and then turns to the east once the larger sand waves cease.

The proposed project involves the subtidal laying of a marine cable in the offshore environment, the laying of concrete mattresses to protect the Beaufort cable at the Greenlink HVDC Interconnector crossing, and any associated maintenance and decommissioning works. As demonstrated in Figure 18, the proposed project is located 1.1km from Seas Off Wexford SPA. Waters within this SPA constitute a feeding resource for breeding seabirds in spring and provide safe feeding and roosting opportunities for birds overwintering / on passage⁴. The proposed Beaufort Offshore Cable route is located in the marine subtidal, in an area of existing vessel traffic and outside of waters designated for this SPA. Given the minimum distance between the proposed works area and this SPA (1.1 km) and the nature of the proposed works, no significant impacts on water quality are foreseen. However, out of an abundance of caution, despite the limited temporal and geographic scale of the proposed project, it is considered that there is the potential for visual and acoustic disturbance (via the works vessel) impacts on seabirds protected as SCIs of this SPA in the absence of mitigation.

In relation to marine mammals, given the proximity of the proposed cable route to the Saltee Islands SAC (16.5 km), there is potential for marine mammals from Saltee Islands SAC (*Halichoerus grypus* (Grey Seal)) to be in the vicinity of the proposed works. Further, following an examination of relevant MU's and foraging areas for grey seal and harbour seal, the following Natura 2000 sites have been screened IN due to the potential movements of harbour porpoise, common bottlenose dolphin, harbour seals, and grey seals (qualifying interests of these SAC):

- Saltee Islands SAC (IE)
- Slaney River Valley SAC (IE)
- Rockabill to Dalkey Island SAC (IE)
- Lambay Island SAC (IE)
- Roaring Water Bay and Islands SAC (IE)
- Glengarriff Harbour and Woodland SAC (IE)
- Kenmare River SAC (IE)
- Galway Bay Complex SAC (IE)
- Kilkieran Bay And Islands SAC (IE)
- Blasket Islands SAC (IE)
- Slyne Head Islands SAC (IE)

⁴ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004237.pdf>

- Inishbofin and Inishshark SAC (IE)
- Slieve Tooe / Tormore Island / Loughros Beg Bay SAC (IE)
- Duvillaun Islands SAC (IE)
- Inishkea Islands SAC (IE)
- Horn Head and Rinclevan SAC (IE)
- Pembrokeshire Marine / Sir Benfro Forol (UK)
- West Wales Marine / Gorllewin Cymru Forol (UK)
- Bristol Channel Approaches/Dynesfeydd Môr Hafren (UK)
- Cardigan Bay / Bae Ceredigion (UK)
- Lundy (UK)
- Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau (UK)
- North Anglesey Marine/Gogledd Môn Forol (UK)
- Isles of Scilly Complex (UK)
- Murlough (UK)
- North Channel (UK)
- The Maidens (UK)
- Humber Estuary (UK)
- Nord Bretagne DH (FR)
- Mers Celtiques – Talus du golfe de Gascogne (FR)
- Côte de Granit rose-Sept-Iles (FR)
- Abers – Côtes des légendes (FR)
- Trégor – Goëlo (FR)
- Baie de Morlaix (FR)
- Ouessant-Molène (FR)
- Anse de Goulven, dunes de Keremma (FR)
- Récifs et landes de la Hague (FR)
- Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay (FR)
- Anse de Vauville (FR)
- Banc et récifs de Surtainville (FR)
- Rade de Brest, estuarie de l'Aulne (FR)
- Côtes de Crozon (FR)
- Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire (FR)
- Chaussée de Sein (FR)
- Cap d'Erquy-Cap Fréhel (FR)
- Cap Sizun (FR)
- Marais du Cotentin et du Bessin – Baie des Veys (FR)
- Baie de Seine occidentale (FR)
- Baie de Saint-Brieuc - Est (FR)
- Récifs du talus du golfe de Gascogne (FR)
- Chausey (FR)
- Baie d'Audieme (FR)
- Littoral Ouest du Cotentin de Bréhal à Pirou (FR)
- Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard (FR)
- Roches de Penmarch (FR)
- Côte de Cancale à Parmè (FR)
- Estuaire de la Rance (FR)
- Baie du Mont Saint-Michel (FR)
- Baie de Seine orientale (FR)
- Littoral Cauchois (FR)
- Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant (FR)

Further information is required to assess the potential effects of the proposed works on these European Sites.

All Natura 2000 sites within 15km, and beyond 15km with the potential for significant effects on Natura 2000 sites (including Irish, French, and UK sites), are listed in Tables 3-5. The qualifying interests, and the potential impact of the development on each European site and qualifying interest screened "IN" is further detailed in Table 6a-6c. In relation to UK sites SACs and SPAs in the UK no longer form part of the EU's Natura 2000 network. Instead, they contribute to a UK national site network on land and at sea, including both the inshore and offshore marine areas. A precautionary approach has been taken to include these sites as these can contain mobile species or have habitats that are listed under the Annexes of the Habitats and Birds Directive. UK Government Ministers have confirmed that the UK's former Natura 2000 sites in the national site network will continue to be the UK's contribution to the Emerald Network.

The proposed Maritime Area Consent (MAC) Application Area in relation to the 12 nm limit, Designated Irish Continental shelf, and Irish Exclusive Economic Zone (EEZ) is demonstrated in Figure 16. Location SACs and SPAs (including Offshore SACs & SPAs) and the proposed MAC Area are demonstrated in Figures 17-19. IE, FR, & UK SACs designated for Grey Seals (*Halichoerus grypus*) within 448km of the Proposed Cable Route Corridor are demonstrated in Figure 20. IE, FR, & UK SACs designated for Harbour Seals (*Phoca vitulina*) within 273km of the Proposed Cable Route Corridor are demonstrated in Figure 21. IE, FR, & UK SACs located within the Management Units (MU) for Bottlenose dolphin (*Tursiops truncatus*) and Harbour Porpoise (*Phocoena phocoena*) are demonstrated in Figures 22 & 23.

Table 3. Proximity to Natura 2000 designated sites.

Code	NATURA 2000 Site	Distance
Special Areas of Conservation		
IE000707	Saltee Islands SAC	16.5 km
IE000764	Hook Head SAC	20 km
IE002269	Carnsore Point SAC	27.2 km
IE000696	Ballyteige Burrow SAC	28.9 km
IE000781	Slaney River Valley SAC	44.4 km
IE003000	Rockabill to Dalkey Island SAC	152.4 km
IE000204	Lambay Island SAC	179 km
IE000101	Roaring Water Bay and Islands SAC	196.3 km
IE000090	Glengarriff Harbour and Woodland SAC	202.1 km
IE002158	Kenmare River SAC	205.8 km
IE000268	Galway Bay Complex SAC	209.3 km
IE002111	Kilkieran Bay And Islands SAC	250.1 km
IE002172	Blasket Islands SAC	265.7 km
IE000328	Slyne Head Islands SAC	294.3 km
IE000278	Inishbofin and Inishshark SAC	303.9 km
IE000190	Slieve Tooley / Tormore Island / Loughros Beg Bay SAC	338 km
IE000495	Duvillaun Islands SAC	338.5 km
IE000507	Inishkea Islands SAC	343.9 km
IE000147	Horn Head and Rinclevan SAC	372.7 km
Special Protection Areas		
IE004237	Seas Off Wexford SPA	1.1 km
IE004002	Saltee Islands SPA	21 km
IE004020	Ballyteige Burrow SPA	30.3 km

Table 4. Proximity to designated sites of conservation importance (UK)

Designation	European Site	Distance
SAC	Pembrokeshire Marine / Sir Benfro Forol	34.1 km
SAC	West Wales Marine / Gorllewin Cymru Forol	44.7 km (Within MU for Harbour Porpoise)
SAC	Bristol Channel Approaches/Dynesfeydd Môr Hafren	80.6 km (Within MU for Harbour Porpoise)
SAC	Cardigan Bay / Bae Ceredigion	105.1 km
SAC	Lundy	118.4 km
SAC	Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau	148.8 km
SAC	North Anglesey Marine/Gogledd Môn Forol	182.3 km (Within MU for Harbour Porpoise)
SAC	Isles of Scilly Complex	184.4 km
SAC	Murlough	250.5 km
SAC	North Channel	263.1 km (Within MU for Harbour Porpoise)
SAC	The Maidens	357.6 km
SAC	Humber Estuary	427.8 km

Table 5. Proximity to designated sites of conservation importance (FR)

Code	Natura 2000 Site	Distance
SAC	Nord Bretagne DH	280 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Mers Celtiques – Talus du golfe de Gascogne	284.8 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Côte de Granit rose-Sept-Iles	342.4 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Abers – Côtes des légendes	353.6 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Trégor – Goëlo	356.8 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Baie de Morlaix	357.6 km (Within MU for Harbour Porpoise)
SAC	Ouessant-Molène	358.8 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Anse de Goulven, dunes de Keremma	360.4 km
SAC	Récifs et landes de la Hague	367.8 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay	375.2 km (Within MU for Harbour Porpoise)
SAC	Anse de Vauville	376.5 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Banc et récifs de Surtainville	386.4 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Rade de Brest, estuarie de l'Aulne	393 km
SAC	Côtes de Crozon	393.8 km

Code	Natura 2000 Site	Distance
		(Within MU for Harbour Porpoise)
SAC	Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire	397.1 km (Within MU for Bottlenose Dolphin)
SAC	Chaussée de Sein	406.8 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Cap d'Erquy-Cap Fréhel	412.5 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Cap Sizun	415 km
SAC	Marais du Cotentin et du Bessin – Baie des Veys	418.3 km
SAC	Baie de Seine occidentale	421.4 km (Within MU for Bottlenose Dolphin)
SAC	Baie de Saint-Brieuc - Est	423.6 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Récifs du talus du golfe de Gascogne	424.9 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Chausey	428.9 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Baie d'Audieme	431.4 km
SAC	Littoral Ouest du Cotentin de Bréhal à Pirou	432.7 km
SAC	Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard	440 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Roches de Penmarch	444.8 km
SAC	Côte de Cancale à Parmè	449.4 km (Within MU for Bottlenose Dolphin)
SAC	Estuaire de la Rance	454.1 km (Within MU for Harbour Porpoise)
SAC	Baie du Mont Saint-Michel	457.2 km (Within MU for Bottlenose Dolphin & Harbour Porpoise)
SAC	Baie de Seine orientale	485.9 km (Within MU for Bottlenose Dolphin)
SAC	Littoral Cauchois	503 km (Within MU for Bottlenose Dolphin)
SAC	Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant	552 km (Within MU for Bottlenose Dolphin)

Initial screening of NATURA 2000 sites, Annex habitats and species within the ZOI of the proposed route.

Table 6a. Initial screening of IE Natura 2000 sites proximate to the Beaufort Offshore Cable Route.

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
Special Areas of Conservation			
IE 000707	Saltee Islands SAC	IN	Conservation Objectives The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Mudflats and sandflats not covered by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Submerged or partially submerged sea caves [8330] Grey Seal (<i>Halichoerus grypus</i>) [1364] Potential Impact The Beaufort Offshore Cable Route (between the Irish 12nm limit and the Irish EEZ) is located 16.5 km from this SAC. Given the minimum distance to this SAC (16.5km) from the Beaufort Offshore Cable Route across a substantial marine environment, no significant impacts on the following qualifying interests are foreseen: – Mudflats and sandflats not covered by seawater at low tide [1140] – Large shallow inlets and bays [1160] – Reefs [1170] – Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] – Submerged or partially submerged sea caves [8330] However, initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on grey seals via underwater noise during cable installation, maintenance, and decommissioning works. Mitigation measures are required to ensure that there are no impacts on grey seals, which are features of interest of this SAC. Given the distance from the works to this SAC, and the nature of the proposed works, there is no possibility of significant effects on the other features of interest of this SAC. Mitigation measures are required for grey seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000781	Slaney River Valley SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			Qualifying Interests Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] <i>Petromyzon marinus</i> (Sea Lamprey) [1095] <i>Lampetra planeri</i> (Brook Lamprey) [1096] <i>Lampetra fluviatilis</i> (River Lamprey) [1099] <i>Alosa fallax fallax</i> (Twaite Shad) [1103] <i>Salmo salar</i> (Salmon) [1106] <i>Lutra lutra</i> (Otter) [1355] <i>Phoca vitulina</i> (Harbour Seal) [1365] Potential Impact This SAC is 44.4 km from the proposed Beaufort Offshore Cable Route. The proposed Beaufort Offshore Cable Route is located within the foraging range of harbour seal (273 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on harbour seal (feature of interest of this SAC) through underwater noise and physical disturbance which could impact the Feature of Interest of this SAC should this species enter the Zone of Influence. Mitigation measures are required to protect the SAC from significant effects. The proposed Beaufort Offshore Cable Route is located 44.4 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a substantial marine environment, in the absence of mitigation measures, no significant impacts on designated habitats, Lamprey species (Sea, Brook, and River), or Freshwater pearl mussel protected as a qualifying interest of this SAC are foreseen from the proposed works. In relation to Atlantic salmon, it has been found that salmon from southeast Ireland tend to move out to the shelf edge before crossing the Atlantic towards Greenland (Rikardson et al., 2021). The proposed project is located within the area of salmon migration recorded as part of Rikardson et al.'s (2021) study (see Appendix AII.1). However, given the nature of the proposed works, and the short timeframe of the proposed works, no significant impacts on salmon are foreseen as a result of the proposed project in the absence of mitigation. In relation to Twaite Shad, given the spatial and temporal nature of the proposed works, and the distance to this SAC, the proposed project is considered too far for any significant interaction to occur. Further, no significant impacts on otter are foreseen. As detailed by Reid et al. (2013), female otters have territories of 7.5 ± 1.5 km in length along a riverine environment and 6.5 ± 1.0 km in coastal environments, while male otter territory along rivers is approximately 13.2 ± 5.3 km in length

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			with a high degree of variability. Given the nature of the proposed works and the distance between the proposed Beaufort Offshore Cable Route and this SAC (44.4 km), in the absence of mitigation, no significant effects on otter species are likely as a result of the proposed project. Mitigation measures are required for harbour seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE003000	Rockabill to Dalkey Island SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Reefs [1170] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] Potential Impact This SAC is 152.4 km from the proposed Beaufort Offshore Cable Route. The proposed Beaufort Offshore Cable Route is located within the Celtic and Irish Seas MU for Harbour Porpoise (JNCC, 2023). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on harbour porpoise (features of interest of this SAC) through underwater noise and physical disturbance which could impact the Features of Interest of this SAC should this mobile marine mammal enter the ZoI. Mitigation measures are required to protect the SAC from significant effects. The works area is located 152.4 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on reefs protected as a qualifying interest of this SAC are foreseen from the proposed works. Mitigation measures are required for harbour porpoise. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000204	Lambay Island SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] <i>Halichoerus grypus</i> (Grey Seal) [1364] <i>Phoca vitulina</i> (Harbour Seal) [1365]

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			Potential Impact This SAC is located 179 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the foraging range of grey seal (448 km) and harbour seal (273 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on harbour and grey seal (features of interest of this SAC) through underwater noise and physical disturbance which could impact the Features of Interest of this SAC. Mitigation measures are required to protect the SAC from significant effects. The Beaufort Offshore Cable Route within the Irish EEZ is located 179 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on habitats protected as a qualifying interest of this SAC are foreseen from the proposed works. Mitigation measures are required for harbour seal and grey seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000101	Roaring Water Bay and Islands SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030] Submerged or partially submerged sea caves [8330] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Lutra lutra</i> (Otter) [1355] <i>Halichoerus grypus</i> (Grey Seal) [1364] Potential Impact This SAC is 196.3 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the Celtic and Irish Seas MU for Harbour Porpoise (JNCC, 2023) and is located within the foraging range of grey seal (448 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on grey seal and harbour porpoise (features of interest of this SAC) through underwater noise and physical disturbance which could impact the Features of Interest of this SAC should this mobile marine mammal enter the ZOI. Mitigation measures are required to protect the SAC from significant effects. The Beaufort Offshore Cable Route within the Irish EEZ is located 196.3 km from this conservation site. Given the nature of the proposed works,

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			and the significant distance to this SAC across a substantial marine environment, in the absence of mitigation measures, no significant impacts on habitats protected as a qualifying interest of this SAC are foreseen from the proposed works. Further, no significant impacts on otter are foreseen. 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. Given the nature of the proposed works and the significant distance between the proposed Beaufort Offshore Cable Route within the Irish EEZ and this SAC (196.3 km), in the absence of mitigation, no significant effects on otter species are likely as a result of the proposed project. Mitigation measures are required for grey seals and harbour porpoise. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000090	Glengarriff Harbour and Woodland SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Geomalacus maculosus (Kerry Slug) [1024] Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303] Lutra lutra (Otter) [1355] Phoca vitulina (Harbour Seal) [1365] Potential Impact This SAC is 202.1 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the foraging range of harbour seal (273 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on harbour seal (feature of interest of this SAC) through underwater noise and physical disturbance which could impact the Feature of Interest of this SAC should this mobile marine mammal enter the ZoI. Mitigation measures are required to protect the SAC from significant effects. The Beaufort Offshore Cable Route within the Irish EEZ is located 202.1 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on habitats, Kerry Slug, or Lesser Horseshoe Bat protected as a qualifying interest of this SAC are foreseen from the proposed works.

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			Further, no significant impacts on otter are foreseen. 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. Given the nature of the proposed works and the significant distance between the proposed cable route within the Irish EEZ and this SAC (202.1 km), in the absence of mitigation, no significant effects on otter species are likely as a result of the proposed project. Mitigation measures are required for harbour seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE002158	Kenmare River SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] European dry heaths [4030] Juniperus communis formations on heaths or calcareous grasslands [5130] Calaminarian grasslands of the <i>Violetalia calaminariae</i> [6130] Submerged or partially submerged sea caves [8330] <i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail) [1014] <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303] <i>Lutra lutra</i> (Otter) [1355] <i>Phoca vitulina</i> (Harbour Seal) [1365] Potential Impact This SAC is located 205.8 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed cable area within the Irish EEZ is located within the foraging range of harbour seal (273 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on harbour seal (feature of interest of this SAC) through underwater noise and physical disturbance which could impact the Feature of Interest of this SAC if harbour seal from this SAC were to enter the SAC. Mitigation measures are required to protect the SAC from significant effects. No significant impacts on otter are foreseen. As detailed by Reid et al. (2013), female otters have territories of 7.5 ± 1.5km in length along a

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			riverine environment and 6.5 ± 1.0 km in coastal environments, while male otter territory along rivers is approximately 13.2 ± 5.3 km in length with a high degree of variability. Given the nature of the proposed works and the significant distance between the proposed Beaufort Offshore Cable Route within the Irish EEZ and this SAC (205.8 km), in the absence of mitigation, no significant effects on otter species are likely as a result of the proposed project. The Beaufort Offshore Cable Route within the Irish EEZ is located 205.8 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on all other habitats or species protected as a qualifying interest of this SAC are foreseen from the proposed works. Mitigation measures are required for harbour seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000268	Galway Bay Complex SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Turloughs [3180] Juniperus communis formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210] Alkaline fens [7230] Limestone pavements [8240] <i>Lutra lutra</i> (Otter) [1355] <i>Phoca vitulina</i> (Harbour Seal) [1365] Potential Impact This SAC is 209.3 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the foraging range of harbour seal (273 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on harbour seal (features of interest of

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			this SAC) through underwater noise and physical disturbance which could impact the Feature of Interest of this SAC should this mobile marine mammal enter the ZoI. Mitigation measures are required to protect the SAC from significant effects. The Beaufort Offshore Cable Route within the Irish EEZ is located 209.3 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on habitats protected as a qualifying interest of this SAC are foreseen from the proposed works. Further, no significant impacts on otter are foreseen. As detailed by Reid et al. (2013), female otters have territories of 7.5 ± 1.5 km in length along a riverine environment and 6.5 ± 1.0 km in coastal environments, while male otter territory along rivers is approximately 13.2 ± 5.3 km in length with a high degree of variability. Given the nature of the proposed works and the significant distance between the proposed Beaufort Offshore Cable Route within the Irish EEZ and this SAC (209.3 km), in the absence of mitigation, no significant effects on otter species are likely as a result of the proposed project. Mitigation measures are required for harbour seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE002111	Kilkieran Bay And Islands SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Machairs (* in Ireland) [21A0] Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [3130] Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>) [6510] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Lutra lutra</i> (Otter) [1355] <i>Phoca vitulina</i> (Harbour Seal) [1365] <i>Najas flexilis</i> (Slender Naiad) [1833] Potential Impact This SAC is 250.1 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the Celtic and Irish Seas MU for Harbour

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			Porpoise (JNCC, 2023) and is located within the foraging range of harbour seal (273 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on harbour seal and harbour porpoise (features of interest of this SAC) through underwater noise and physical disturbance which could impact the Features of Interest of this SAC should this mobile marine mammal enter the Zol. Mitigation measures are required to protect the SAC from significant effects. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located 250.1 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on habitats or Slender Naiad protected as a qualifying interest of this SAC are foreseen from the proposed works. Further, no significant impacts on otter are foreseen. As detailed by Reid et al. (2013), female otters have territories of 7.5 ± 1.5 km in length along a riverine environment and 6.5 ± 1.0 km in coastal environments, while male otter territory along rivers is approximately 13.2 ± 5.3 km in length with a high degree of variability. Given the nature of the proposed works and the significant distance between the proposed Beaufort Offshore Cable Route within the Irish EEZ and this SAC (250.1 km), in the absence of mitigation, no significant effects on otter species are likely as a result of the proposed project. Mitigation measures are required for harbour seals and harbour porpoise. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE002172	Blasket Islands SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030] Submerged or partially submerged sea caves [8330] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Halichoerus grypus</i> (Grey Seal) [1364] Potential Impact This SAC is 265.7 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed cable area within the Irish EEZ is located within the Celtic and Irish Seas MU for Harbour Porpoise (JNCC, 2023) and is located within the foraging range of grey seal (448 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on grey seal and harbour porpoise (features of interest of this SAC) through underwater noise and physical

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			disturbance which could impact the Features of Interest of this SAC should this mobile marine mammal enter the Zol. Mitigation measures are required to protect the SAC from significant effects. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located 265.7 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on habitats protected as a qualifying interest of this SAC are foreseen from the proposed works. Mitigation measures are required for harbour porpoise and grey seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000328	Slyne Head Islands SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Reefs [1170] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349] <i>Halichoerus grypus</i> (Grey Seal) [1364] Potential Impact This SAC is 294.3 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the foraging range of grey seal (448 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on grey seal and harbour porpoise (features of interest of this SAC) through underwater noise and physical disturbance which could impact the Features of Interest of this SAC should this mobile marine mammal enter the Zol. Mitigation measures are required to protect the SAC from significant effects. This SAC is located within the West Coast of Ireland MU for Bottlenose Dolphin. The proposed Beaufort Offshore Cable Route is located outside of this MU. No significant effects on bottlenose dolphin protected as a qualifying interest of this SAC are foreseen in the absence of mitigation. The proposed cable area within the Irish EEZ is located 294.3 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on reefs protected as a qualifying interest of this SAC are foreseen from the proposed works. Mitigation measures are required for grey seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000278	Inishbofin and	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
	Inishshark SAC		maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Coastal lagoons [1150] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] <i>Halichoerus grypus</i> (Grey Seal) [1364] Potential Impact This SAC is 303.9 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the foraging range of grey seal (448 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on grey seal (feature of interest of this SAC) through underwater noise and physical disturbance which could impact the Feature of Interest of this SAC should this mobile marine mammal enter the ZoI. Mitigation measures are required to protect the SAC from significant effects. The proposed cable area within the Irish EEZ is located 303.9 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on habitats protected as a qualifying interest of this SAC are foreseen from the proposed works. Mitigation measures are required for grey seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000190	Slieve Tooley / Tormore Island / Loughros Beg Bay SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Decalcified fixed dunes with <i>Empetrum nigrum</i> [2140] Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150] Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) [2170] Humid dune slacks [2190] Alpine and Boreal heaths [4060]

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			Blanket bogs (* if active bog) [7130] <i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail) [1014] <i>Lutra lutra</i> (Otter) [1355] <i>Halichoerus grypus</i> (Grey Seal) [1364] Potential Impact This SAC is 338 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the foraging range of grey seal (448 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on grey seal (feature of interest of this SAC) through underwater noise and physical disturbance which could impact the Feature of Interest of this SAC should this mobile marine mammal enter the Zol. Mitigation measures are required to protect the SAC from significant effects. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located 338 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on habitats or Narrow-mouthed Whorl Snail protected as a qualifying interest of this SAC are foreseen from the proposed works. Further, no significant impacts on otter are foreseen. As detailed by Reid et al. (2013), female otters have territories of 7.5 ± 1.5 km in length along a riverine environment and 6.5 ± 1.0 km in coastal environments, while male otter territory along rivers is approximately 13.2 ± 5.3 km in length with a high degree of variability. Given the nature of the proposed works and the significant distance between the proposed Beaufort Offshore Cable Route within the Irish EEZ and this SAC (338 km), in the absence of mitigation, no significant effects on otter species are likely as a result of the proposed project. Mitigation measures are required for grey seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000495	Duvillaun Islands SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349] <i>Halichoerus grypus</i> (Grey Seal) [1364] Potential Impact This SAC is 338.5 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the foraging range of grey seal (448 km) (Carter et al., 2022).

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on grey seal and harbour porpoise (features of interest of this SAC) through underwater noise and physical disturbance which could impact the Features of Interest of this SAC should this mobile marine mammal enter the ZoI. Mitigation measures are required to protect the SAC from significant effects. This SAC is located within the West Coast of Ireland MU for Bottlenose Dolphin. The proposed Beaufort Offshore Cable Route is located outside of this MU. No significant effects on bottlenose dolphin protected as a qualifying interest of this SAC are foreseen in the absence of mitigation. Mitigation measures are required for grey seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000507	Inishkea Islands SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Qualifying Interests Machairs (* in Ireland) [21A0] <i>Halichoerus grypus</i> (Grey Seal) [1364] <i>Petalophyllum ralfsii</i> (Petalwort) [1395] Potential Impact This SAC is 343.9 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the foraging range of grey seal (448 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on grey seal (feature of interest of this SAC) through underwater noise and physical disturbance which could impact the Feature of Interest of this SAC should this mobile marine mammal enter the ZoI. Mitigation measures are required to protect the SAC from significant effects. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located 343.9 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on Machairs and Petalwort protected as a qualifying interest of this SAC are foreseen from the proposed works. Mitigation measures are required for grey seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
IE000147	Horn Head and Rinclevan SAC	IN	Conservation Objective The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			Qualifying Interests Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) [2170] Humid dune slacks [2190] Machairs (* in Ireland) [21A0] Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [3130] <i>Vertigo geyeri</i> (Geyer's Whorl Snail) [1013] <i>Halichoerus grypus</i> (Grey Seal) [1364] <i>Petalophyllum ralfsii</i> (Petalwort) [1395] <i>Najas flexilis</i> (Slender Naiad) [1833] Potential Impact This SAC is 372.7 km from the proposed Beaufort Offshore Cable Route within the Irish EEZ. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the foraging range of grey seal (448 km) (Carter et al., 2022). Initial assessment identifies that, in the absence of mitigation measures, there may be potential for impact on grey seal (feature of interest of this SAC) through underwater noise and physical disturbance which could impact the Feature of Interest of this SAC should this mobile marine mammal enter the Zol. Mitigation measures are required to protect the SAC from significant effects. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located 372.7 km from this conservation site. Given the nature of the proposed works, and the significant distance to this SAC across a marine environment, in the absence of mitigation measures, no significant impacts on habitats, Geyer's Whorl Snail, Slender Naiad and Petalwort protected as a qualifying interest of this SAC are foreseen from the proposed works. Mitigation measures are required for grey seals. Further information is required to determine the potential for adverse effects on this SAC. NIS is Required.
Special Protection Areas			
IE004237	Seas Off Wexford SPA	IN	Conservation Objectives The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Special Conservation Interests Red-throated Diver (<i>Gavia stellata</i>) [A001] Fulmar (<i>Fulmarus glacialis</i>) [A009] Manx Shearwater (<i>Puffinus puffinus</i>) [A013] Gannet (<i>Morus bassanus</i>) [A016] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018]

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			Common Scoter (<i>Melanitta nigra</i>) [A065] Mediterranean Gull (<i>Larus melanocephalus</i>) [A176] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Roseate Tern (<i>Sterna dougallii</i>) [A192] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200] Puffin (<i>Fratercula arctica</i>) [A204] Sandwich Tern (<i>Thalasseus sandvicensis</i>) [A863] Little Tern (<i>Sternula albifrons</i>) [A885] Potential Impact The proposed Beaufort Offshore Cable Route is not within the boundaries of this SPA. This SPA is located approximately 1.1 km from the proposed works. Proposed works are located exclusively within the marine subtidal between the Irish 12nm and EEZ. The proposed cable route is within an area of existing vessel traffic and fishing activity. Waters within this SPA constitute a feeding resource for breeding seabirds in spring and provide safe feeding opportunities for birds overwintering / on passage⁵. Given the minimum distance between the proposed works area and this SPA (1.1 km) and the nature of the proposed works, no significant impacts on water quality are foreseen. However, out of an abundance of caution, despite the limited temporal and geographic scale of the proposed project, it is considered that there is the potential for visual and acoustic disturbance (via the works vessel) impacts on seabirds protected as SCIs of this SPA which may be foraging / resting in waters along the proposed Beaufort Offshore Cable Route in the absence of mitigation. Mitigation measures are required to protect the SPA from significant effects. Natura Impact Statement Required
IE004002	Saltee Islands SPA	IN	Conservation Objectives The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Special Conservation Interests Fulmar (<i>Fulmarus glacialis</i>) [A009] Gannet (<i>Morus bassanus</i>) [A016] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200] Puffin (<i>Fratercula arctica</i>) [A204]

⁵ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004237.pdf>

NATURA Site	NAME	Screened In/Out	SSCO's/Reason
			Potential Impact The proposed Beaufort Offshore Cable Route is not within the boundaries of this SPA. This SPA is located approximately 21 km from the proposed works. Proposed works are located exclusively within the marine subtidal between the Irish 12nm and EEZ. The proposed cable route is within an area of existing vessel traffic and fishing activity. Waters proximate to the Beaufort Offshore Cable Route constitute a feeding resource for breeding seabirds in spring and provide safe feeding opportunities for birds overwintering / on passage. Given the minimum distance between the proposed works area and this SPA (21 km) and the nature of the proposed works, no significant impacts on water quality are foreseen. However, out of an abundance of caution, despite the limited temporal and geographic scale of the proposed project, it is considered that there is the potential for visual and acoustic disturbance (via the works vessel) impacts on seabirds protected as SCIs of this SPA which may be foraging / resting in waters along the proposed Beaufort Offshore Cable Route in the absence of mitigation. Mitigation measures are required to protect the SPA from significant effects. Natura Impact Statement Required

Table 6b. Initial screening of UK NATURA 2000 sites within 15km, and beyond with potential for significant effect

Name	Screened In/Out	Conservation Objectives, Features of Interest and potential for significant effects.
Pembrokeshire Marine / Sir Benfro Forol Cardigan Bay / Bae Ceredigion Lundy Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau Isles of Scilly Complex The Maidens Humber Estuary	In	Conservation Objective To maintain (or restore where appropriate) the qualifying interests to favourable condition. Relevant Qualifying Interest <i>Halichoerus grypus</i> (Grey Seal) [1364] Potential Impact The proposed Beaufort Offshore Cable Route is located within 448km of the following UK SACs (within the identified 448km foraging range of grey seal (Carter <i>et al.</i>, 2022)): • Pembrokeshire Marine / Sir Benfro Forol • Cardigan Bay / Bae Ceredigion • Lundy • Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau • Isles of Scilly Complex • The Maidens • Humber Estuary Initial assessment identifies that, in the absence of mitigation measures, and out of an abundance of caution, there may be potential for impact on grey seal (qualifying interests of the identified UK SACs) through underwater noise and physical disturbance which could impact the Qualifying Interest of these SACs. Mitigation measures are required to protect these SACs from significant effects.

Name	Screened In/Out	Conservation Objectives, Features of Interest and potential for significant effects.
		The proposed project has the potential to introduce noise into the marine environment and mitigation measures are required to protect grey seal. Natura Impact Statement Required
Murlough	In	Conservation Objective To maintain (or restore where appropriate) the qualifying interests to favourable condition. Relevant Qualifying Interest <i>Halichoerus grypus</i> (Harbour Seal) [1364] Potential Impact The proposed Beaufort Offshore Cable Route is located within 273km of the following UK SAC (within the identified 273km foraging range of harbour seal (Carter <i>et al.</i>, 2022)): • Murlough Initial assessment identifies that, in the absence of mitigation measures, and out of an abundance of caution, there may be potential for impact on harbour seal (qualifying interest of the identified UK SAC) through underwater noise and physical disturbance which could impact the Qualifying Interest of this SAC. Mitigation measures are required to protect this SAC from significant effects. The proposed project has the potential to introduce noise into the marine environment and mitigation measures are required to protect harbour seal. Natura Impact Statement Required
West Wales Marine / Gorllewin Cymru Forol Bristol Channel Approaches/Dynesfeydd Môr Hafren North Anglesey Marine/Gogledd Môn Forol North Channel	IN	Conservation Objective To maintain (or restore where appropriate) the qualifying interests to favourable condition. Relevant Qualifying Interest <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] Potential Impact The proposed Beaufort Offshore Cable Route (12nm – Irish EEZ) is located within the Celtic and Irish Seas MU for Harbour Porpoise (JNCC, 2023). The Harbour Porpoise [1351] is a Qualifying Interest of the following UK SACs located within the Celtic and Irish Seas MU: • M West Wales Marine / Gorllewin Cymru Forol • Bristol Channel Approaches/Dynesfeydd Môr Hafren • North Anglesey Marine/Gogledd Môn Forol • North Channel Initial assessment identifies that, in the absence of mitigation measures, and out of an abundance of caution, there may be potential for impact on Harbour Porpoise (qualifying interests of the identified UK SACs) through underwater noise and physical disturbance which could impact the Qualifying Interests of these

Name	Screened In/Out	Conservation Objectives, Features of Interest and potential for significant effects.
		SACs. Mitigation measures are required to protect these SACs from significant effects. The proposed project has the potential to introduce noise into the marine environment and mitigation measures are required to protect harbour porpoise. Natura Impact Statement Required

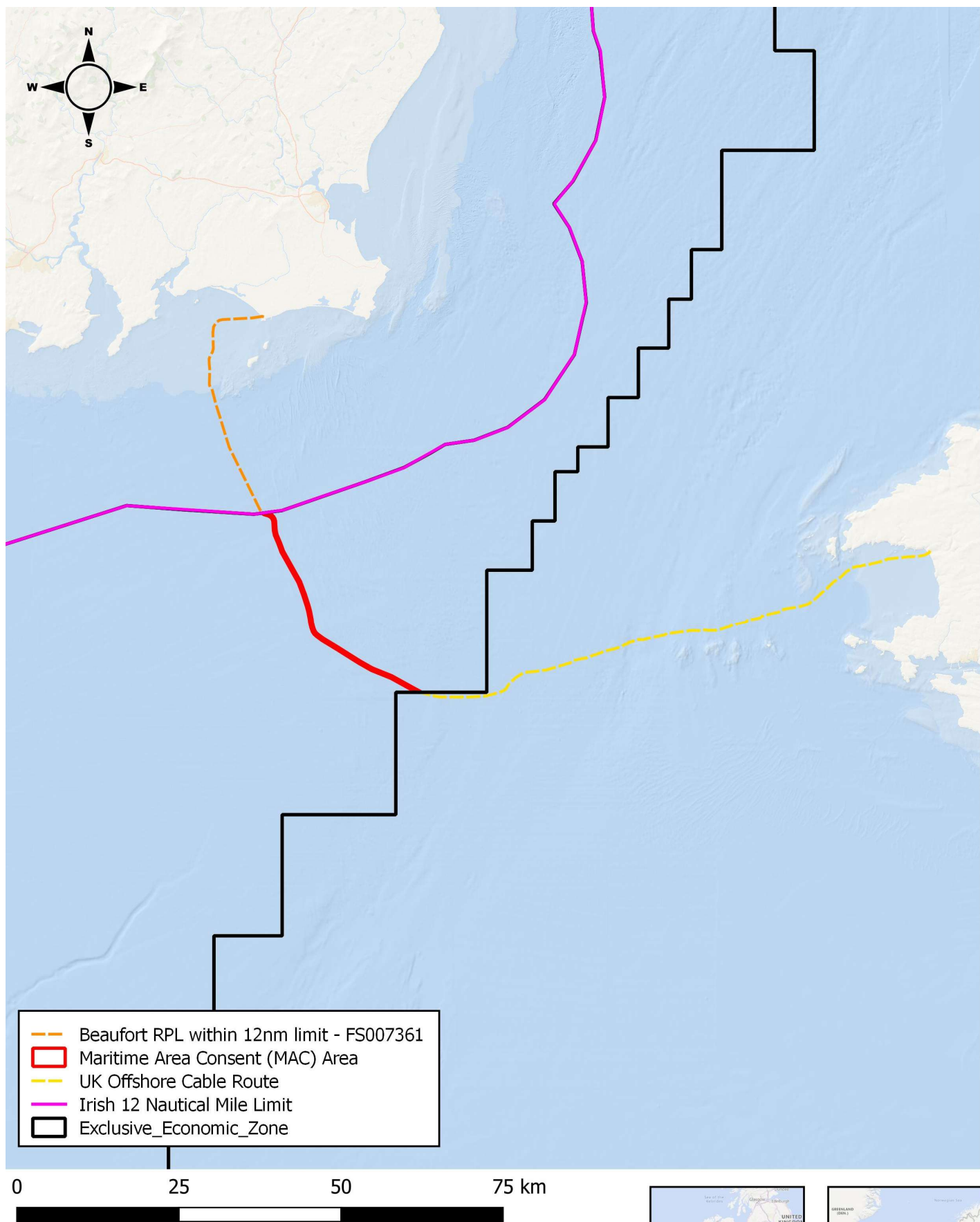
Table 6c. Initial screening of FR NATURA 2000 sites within 15km, and beyond with potential for significant effect

Name	Screened In/Out	Conservation Objectives, Features of Interest and potential for significant effects.
Côte de Granit rose-Sept-Iles Abers – Côtes des légendes Trégor – Goëlo Récifs et landes de la Hague Baie de Morlaix Anse de Goulven, dunes de Keremma Ouessant-Molène Anse de Vauville Banc et récifs de Surtainville Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire Rade de Brest, estuarie de l’Aulne Côtes de Crozon Marais du Cotentin et du Bessin – Baie des Veys Chaussée de Sein Baie de Seine occidentale Cap Sizun Chaucy Baie de Saint-Brieuc - Est Littoral Ouest du Cotentin de Bréhal à Pirou Baie d’Audieme	In	Conservation Objective To maintain (or restore where appropriate) the qualifying interests to favourable condition. Relevant Qualifying Interest <i>Halichoerus grypus</i> (Grey Seal) [1364] Potential Impact The proposed Beaufort Offshore Cable Route is located within 448km of the following French SACs (within the identified 448km foraging range of grey seal (Carter <i>et al.</i>, 2022)): • Côte de Granit rose-Sept-Iles • Abers – Côtes des légendes • Trégor – Goëlo • Récifs et landes de la Hague • Baie de Morlaix • Anse de Goulven, dunes de Keremma • Ouessant-Molène • Anse de Vauville • Banc et récifs de Surtainville • Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay • Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire • Rade de Brest, estuarie de l’Aulne • Côtes de Crozon • Marais du Cotentin et du Bessin – Baie des Veys • Chaussée de Sein • Baie de Seine occidentale • Cap Sizun • Chaucy • Baie de Saint-Brieuc - Est • Littoral Ouest du Cotentin de Bréhal à Pirou • Baie d’Audieme • Baie de Lancieux, Baie de l’Arguenon, Archipel de Saint Malo et Dinard Initial assessment identifies that, in the absence of mitigation measures, and out of an abundance of caution, there may be potential for impact on grey seal (qualifying interests of the

Name	Screened In/Out	Conservation Objectives, Features of Interest and potential for significant effects.
Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard		identified French SACs) through underwater noise and physical disturbance which could impact the Qualifying Interest of these SACs. Mitigation measures are required to protect these SACs from significant effects. The proposed project has the potential to introduce noise into the marine environment and mitigation measures are required to protect grey seal. Natura Impact Statement Required
Nord Bretagne DH Mers Celtiques – Talus du golfe de Gascogne Côte de Granit rose-Sept-Iles Abers – Côtes des légendes Trégor – Goëlo Baie de Morlaix Ouessant-Molène Récifs et landes de la Hague Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay Anse de Vauville Banc et récifs de Surtainville Côtes de Crozon Chaussée de Sein Cap d'Erquy-Cap Fréhel Baie de Saint-Brieuc – Est Récifs du talus du golfe de Gascogne Chausey Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard Estuaire de la Rance Baie du Mont Saint-Michel	IN	Conservation Objective To maintain (or restore where appropriate) the qualifying interests to favourable condition. Relevant Qualifying Interest <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] Potential Impact The proposed Beaufort Offshore Cable Route (12nm – Irish EEZ) is located within the Celtic and Irish Seas MU for Harbour Porpoise (JNCC, 2023). The Harbour Porpoise [1351] is a Qualifying Interest of the following French SACs located within the Celtic and Irish Seas MU: • Nord Bretagne DH • Mers Celtiques – Talus du golfe de Gascogne • Côte de Granit rose-Sept-Iles • Abers – Côtes des légendes • Trégor – Goëlo • Baie de Morlaix • Ouessant-Molène • Récifs et landes de la Hague • Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay • Anse de Vauville • Banc et récifs de Surtainville • Côtes de Crozon • Chaussée de Sein • Cap d'Erquy-Cap Fréhel • Baie de Saint-Brieuc – Est • Récifs du talus du golfe de Gascogne • Chausey • Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard • Estuaire de la Rance • Baie du Mont Saint-Michel Initial assessment identifies that, in the absence of mitigation measures, and out of an abundance of caution, there may be potential for impact on Harbour Porpoise (qualifying interests of the identified French SACs) through underwater noise and physical disturbance which could impact the Qualifying Interests of these

Name	Screened In/Out	Conservation Objectives, Features of Interest and potential for significant effects.
		SACs. Mitigation measures are required to protect these SACs from significant effects. The proposed project has the potential to introduce noise into the marine environment and mitigation measures are required to protect harbour porpoise. Natura Impact Statement Required
Nord Bretagne DH Mers Celtiques – Talus du golfe de Gascogne Côte de Granit rose-Sept-Iles Abers – Côtes des légendes Trégor – Goëlo Ouessant-Molène Récifs et landes de la Hague Anse de Vauville Banc et récifs de Surtainville Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire Chaussée de Sein Cap d'Erquy-Cap Fréhel Baie de Seine occidentale Baie de Saint-Brieuc - Est Récifs du talus du golfe de Gascogne Chausey Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard Côte de Cancale à Parmè Baie du Mont Saint-Michel Baie de Seine orientale Littoral Cauchois Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardighen et Dunes de Wissant	IN	Conservation Objective To maintain (or restore where appropriate) the qualifying interests to favourable condition. Relevant Qualifying Interest <i>Tursiops truncatus</i> (Bottlenose Dolphin) [1349] Potential Impact The proposed Beaufort Offshore Cable Route (12nm – Irish EEZ) is located within the Offshore Channel, Celtic Sea and SW England MU for Bottlenose Dolphin (JNCC, 2023). The Bottlenose Dolphin [1349] is a Qualifying Interest of the following French SACs located within the Offshore Channel, Celtic Sea and SW England MU: • Nord Bretagne DH • Mers Celtiques – Talus du golfe de Gascogne • Côte de Granit rose-Sept-Iles • Abers – Côtes des légendes • Trégor – Goëlo • Ouessant-Molène • Récifs et landes de la Hague • Anse de Vauville • Banc et récifs de Surtainville • Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire • Chaussée de Sein • Cap d'Erquy-Cap Fréhel • Baie de Seine occidentale • Baie de Saint-Brieuc - Est • Récifs du talus du golfe de Gascogne • Chausey • Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard • Côte de Cancale à Parmè • Baie du Mont Saint-Michel • Baie de Seine orientale • Littoral Cauchois • Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardighen et Dunes de Wissant Initial assessment identifies that, in the absence of mitigation measures, and out of an abundance of caution, there may be

Name	Screened In/Out	Conservation Objectives, Features of Interest and potential for significant effects.
		potential for impact on Bottlenose Dolphin (qualifying interests of the identified French SACs) through underwater noise and physical disturbance which could impact the Qualifying Interests of these SACs. Mitigation measures are required to protect these SACs from significant effects. The proposed project has the potential to introduce noise into the marine environment and mitigation measures are required to protect harbour porpoise. Natura Impact Statement Required

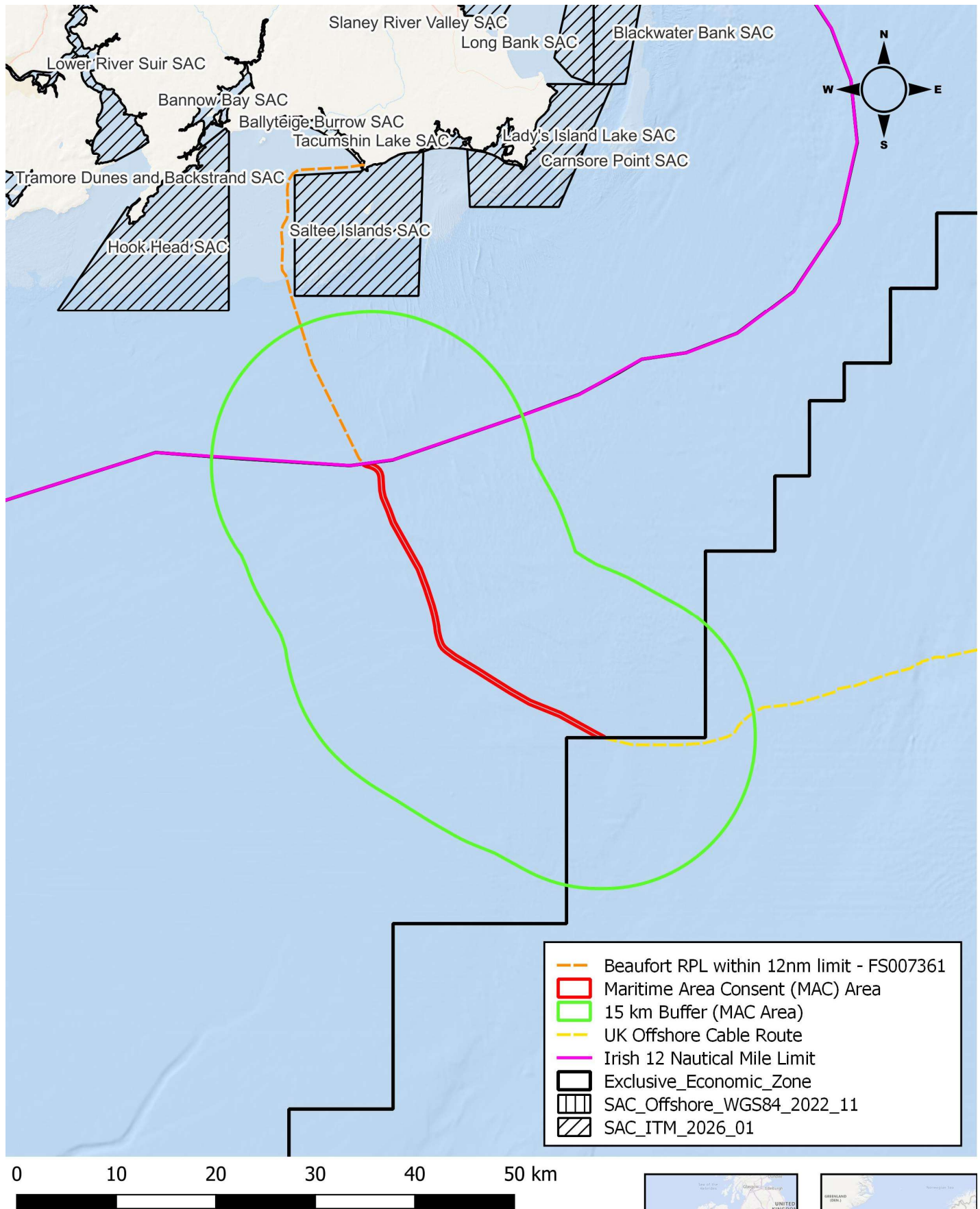


Project: Beaufort Subsea Fibre Optic Cable
 Location: Celtic Sea
 Date: 11th March 2026
 Drawn By: Bryan Deegan (Altamar)

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Figure 16: Proposed Beaufort Cable Route (incl. 12nm limit and EEZ)



Project: Beaufort Subsea Fibre Optic Cable
 Location: Celtic Sea
 Date: 11th March 2026
 Drawn By: Bryan Deegan (Altamar)

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Figure 17: Special Areas of Conservation within 15 km of the Offshore Beaufort Cable.

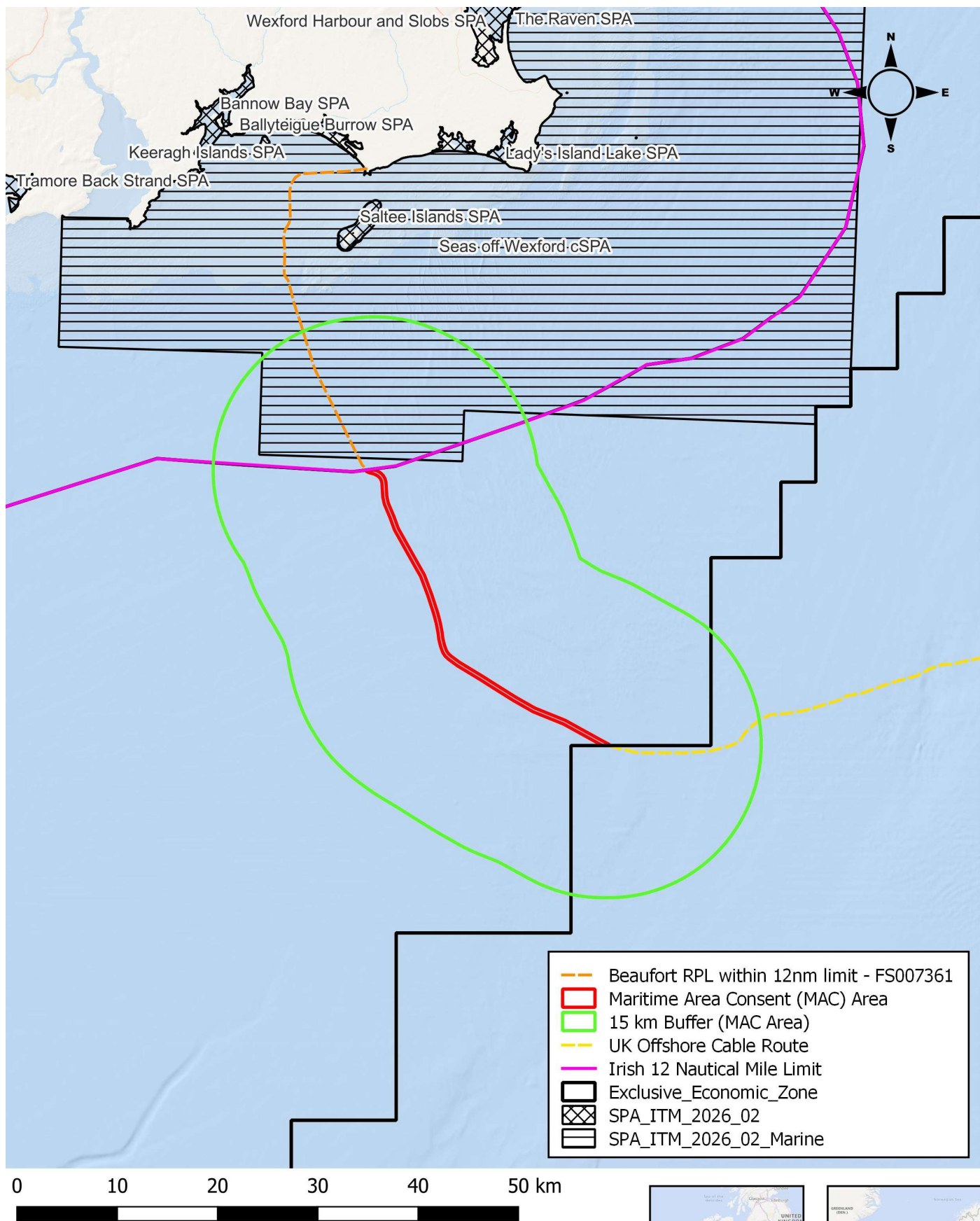
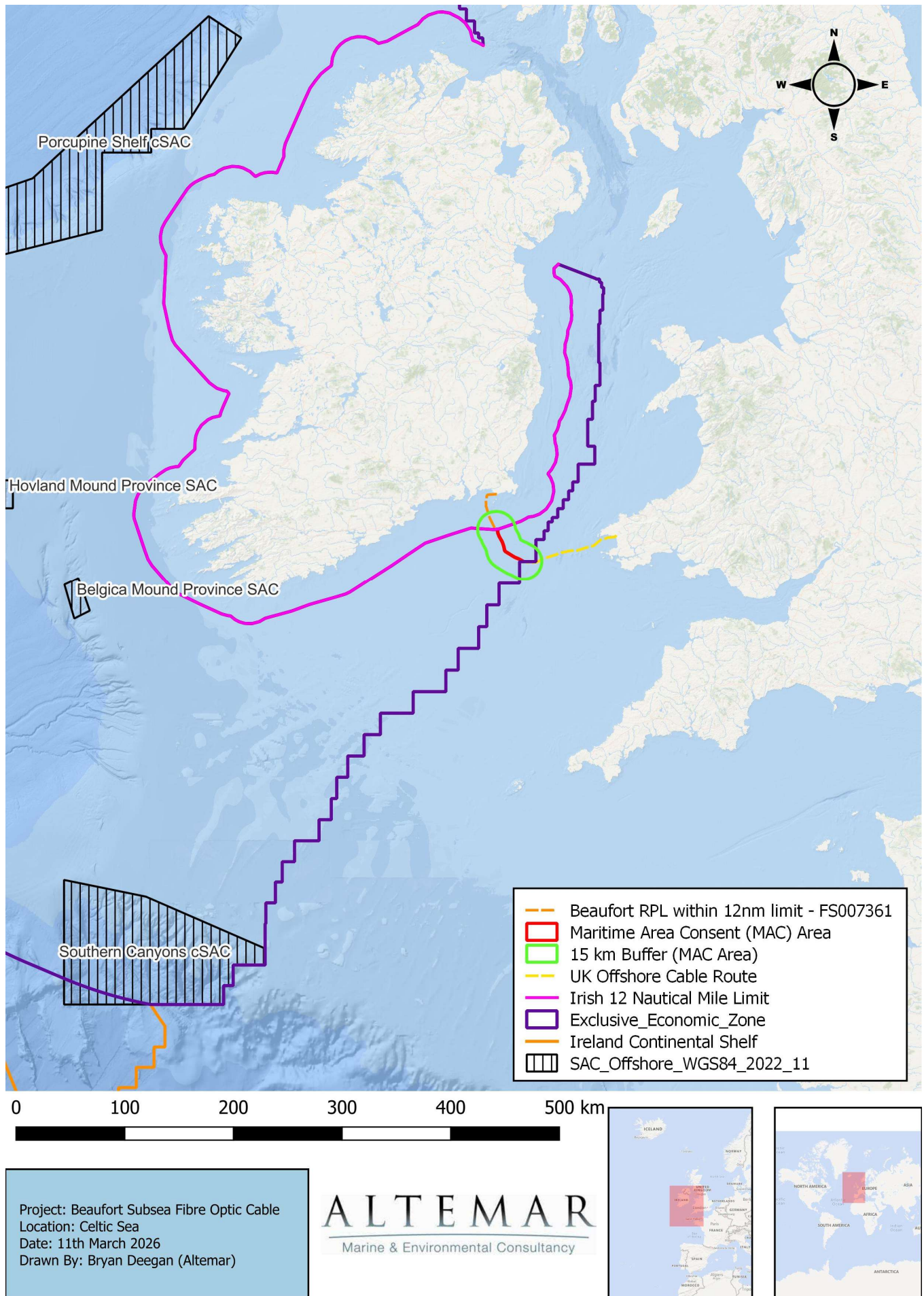


Figure 18: Special Protection Areas (incl. Marine SPAs) within 15 km of the Offshore Beaufort Cable.



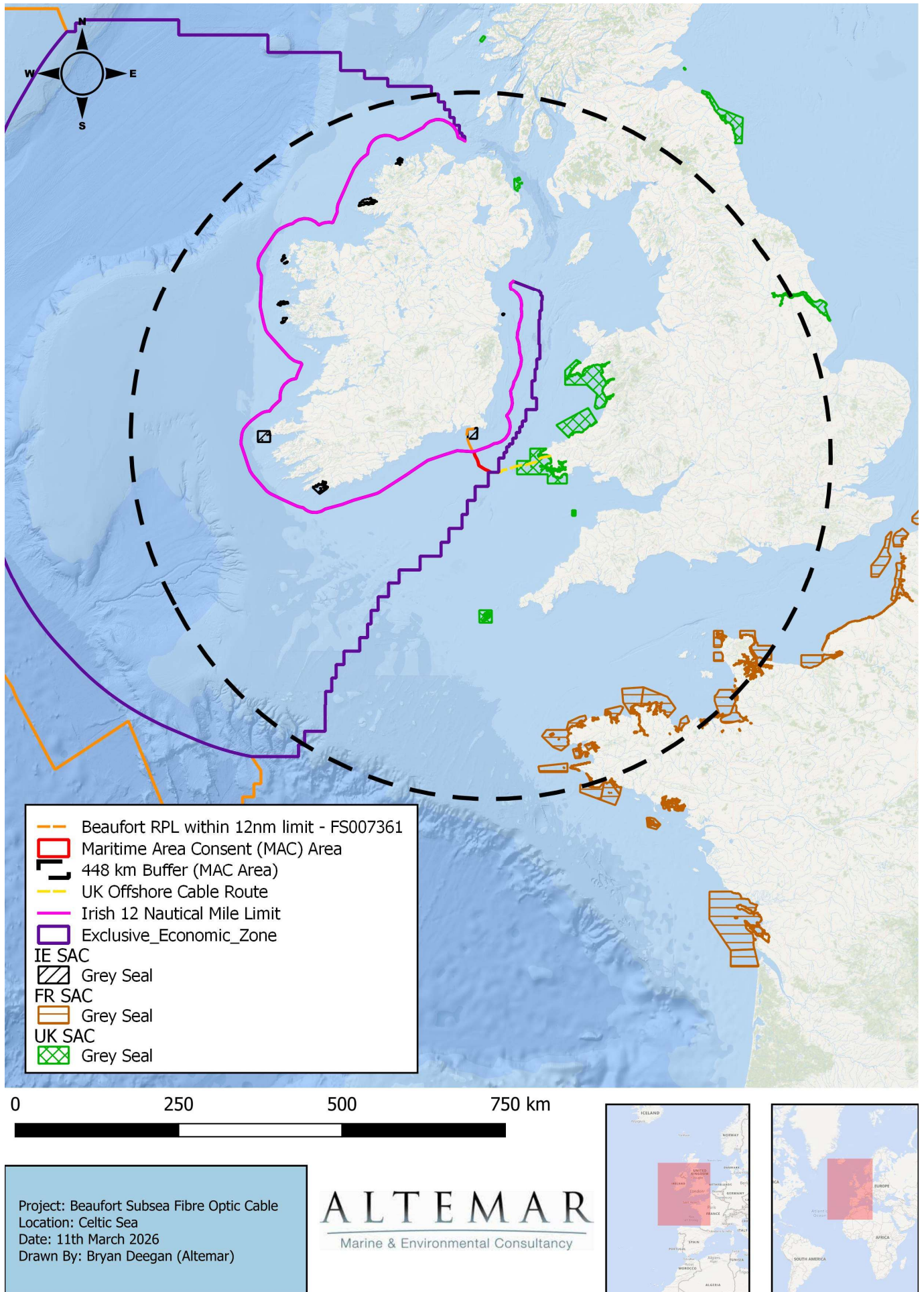


Figure 20: IE, FR, & UK SACs designated for Grey Seals (*Halichoerus grypus*) within 448km of the Offshore Beaufort Cable Route

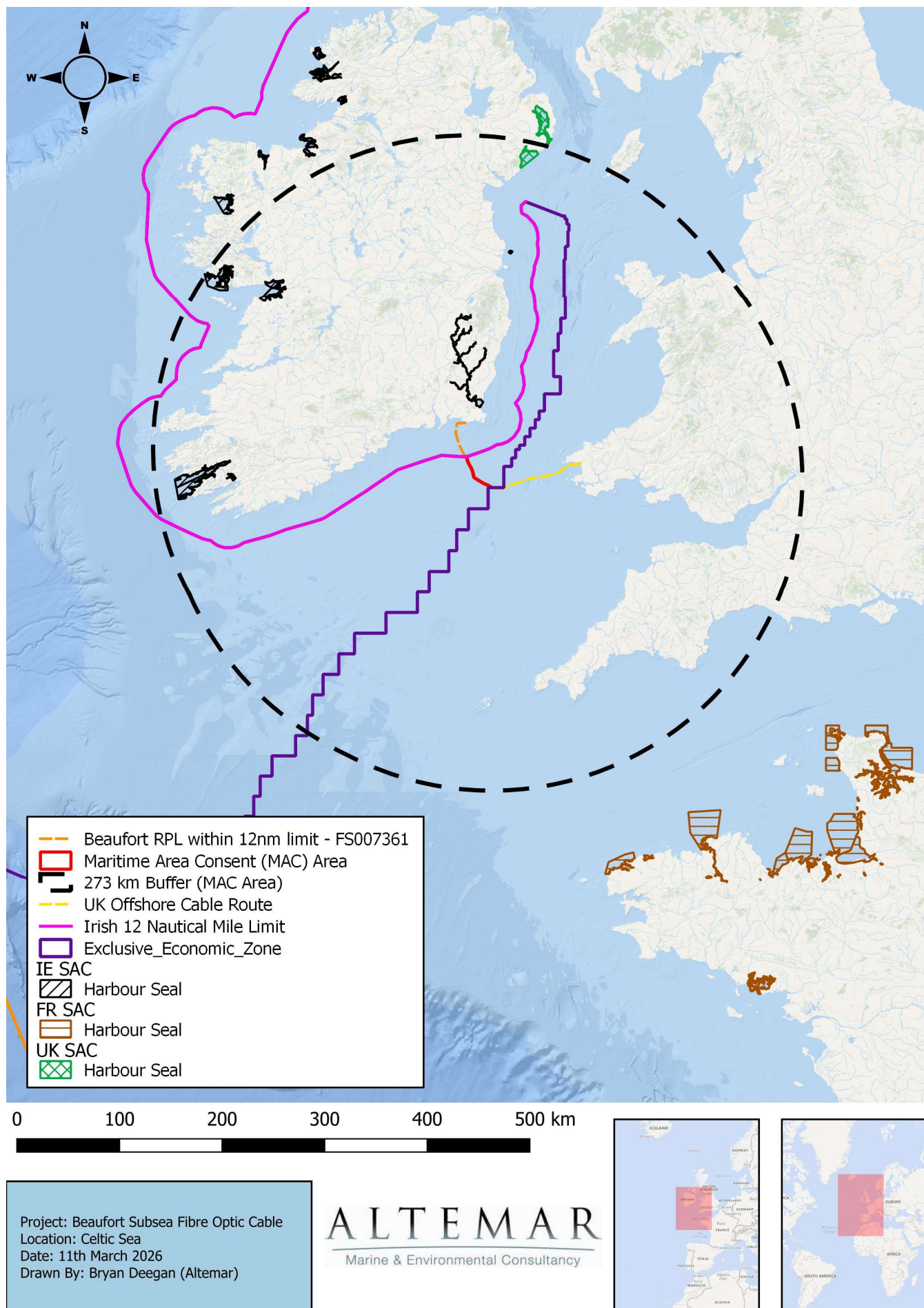


Figure 21: IE, FR, & UK SACs designated for Harbour Seals (*Phoca vitulina*) within 273km of the Proposed Offshore Beaufort Cable Route

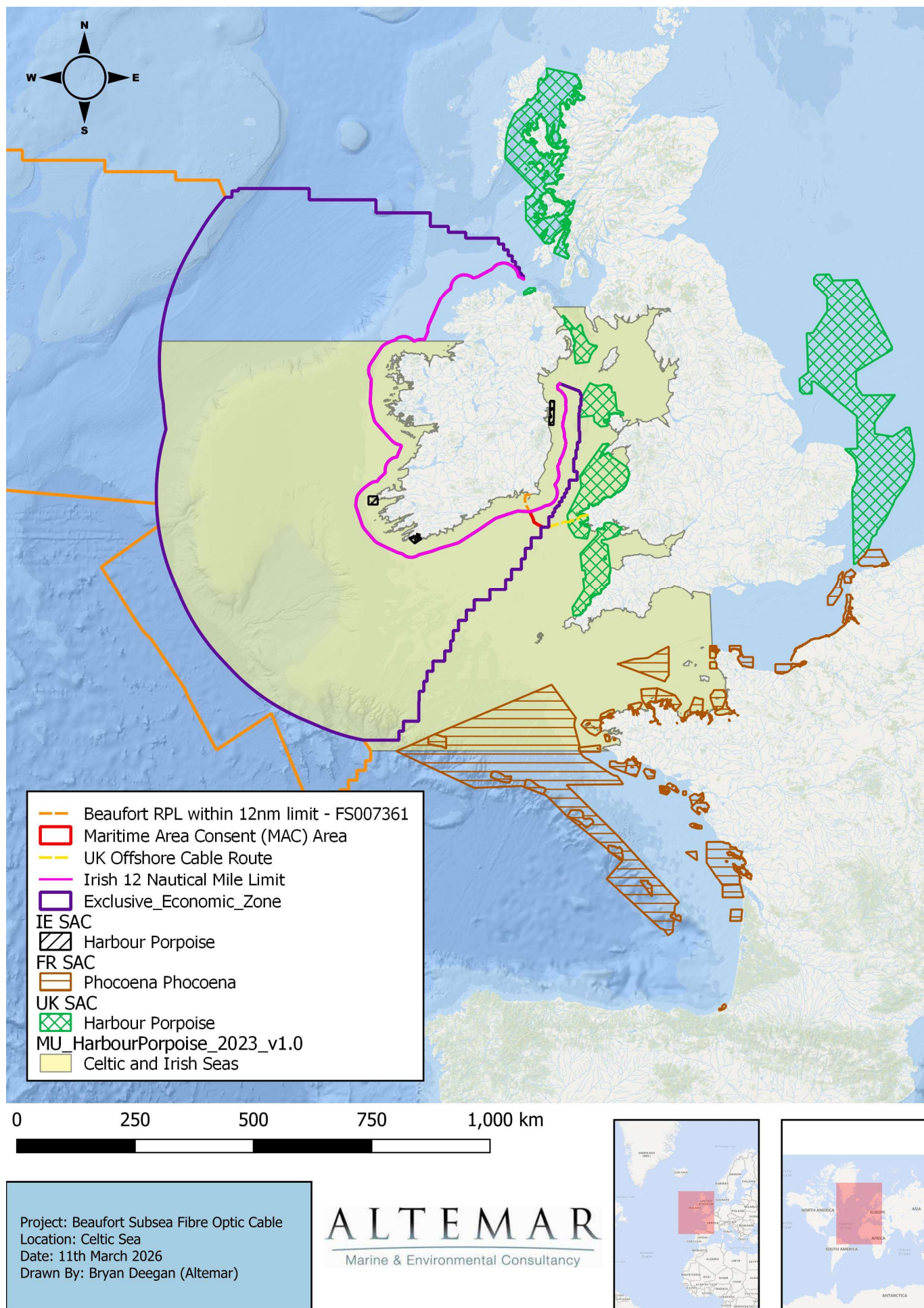
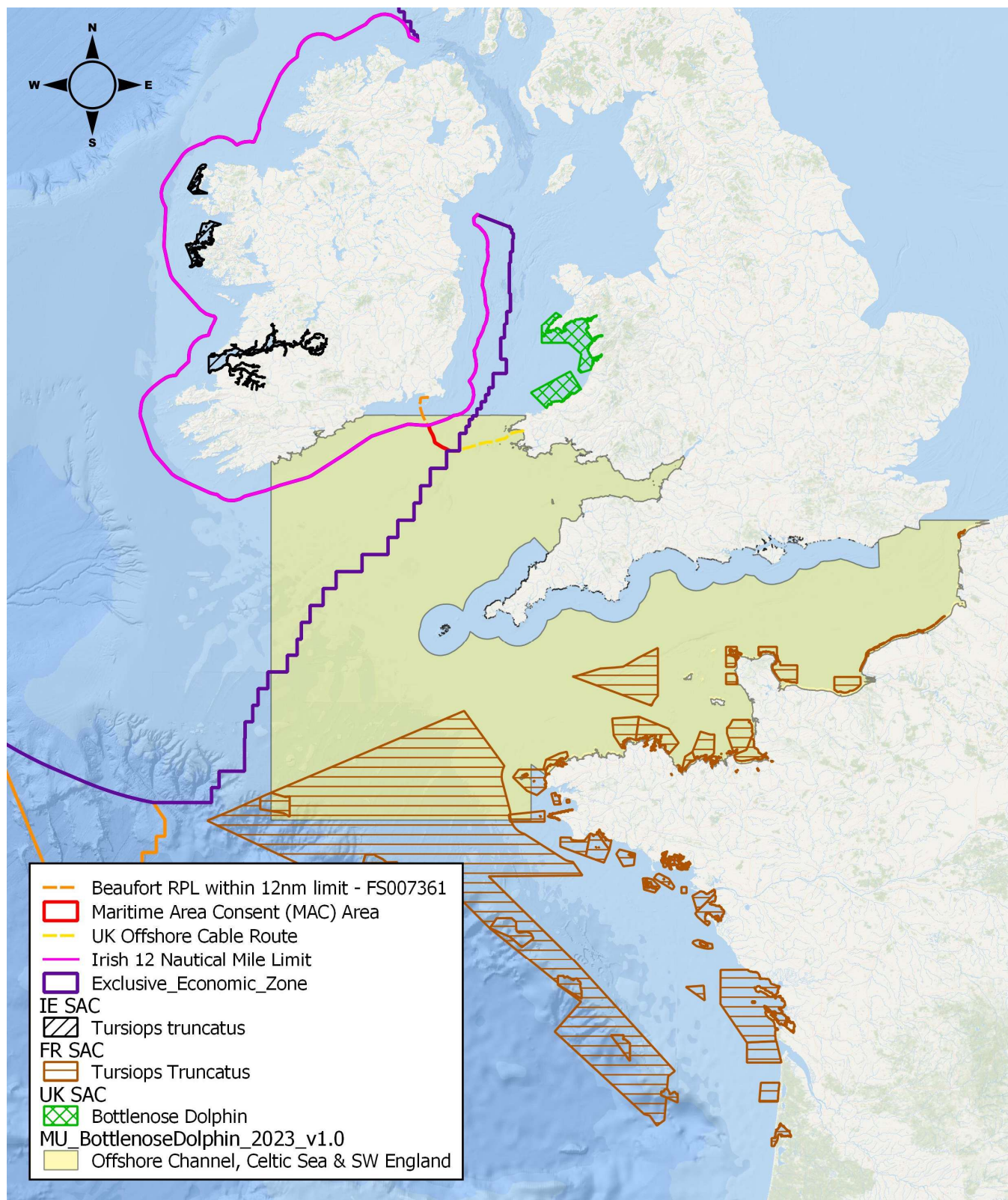


Figure 22: IE, FR, & UK SACs designated for Harbour Porpoise (*Phocoena phocoena*) within the Celtic and Irish Seas MU for Harbour Porpoise



0 100 200 300 400 500 km

Project: Beaufort Subsea Fibre Optic Cable
 Location: Celtic Sea
 Date: 11th March 2026
 Drawn By: Bryan Deegan (Altamar)

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Figure 23: IE, FR, & UK SACs designated for Bottlenose Dolphin (*Tursiops truncatus*) within the Offshore Channel, Celtic Sea & SW England MU for Bottlenose Dolphin

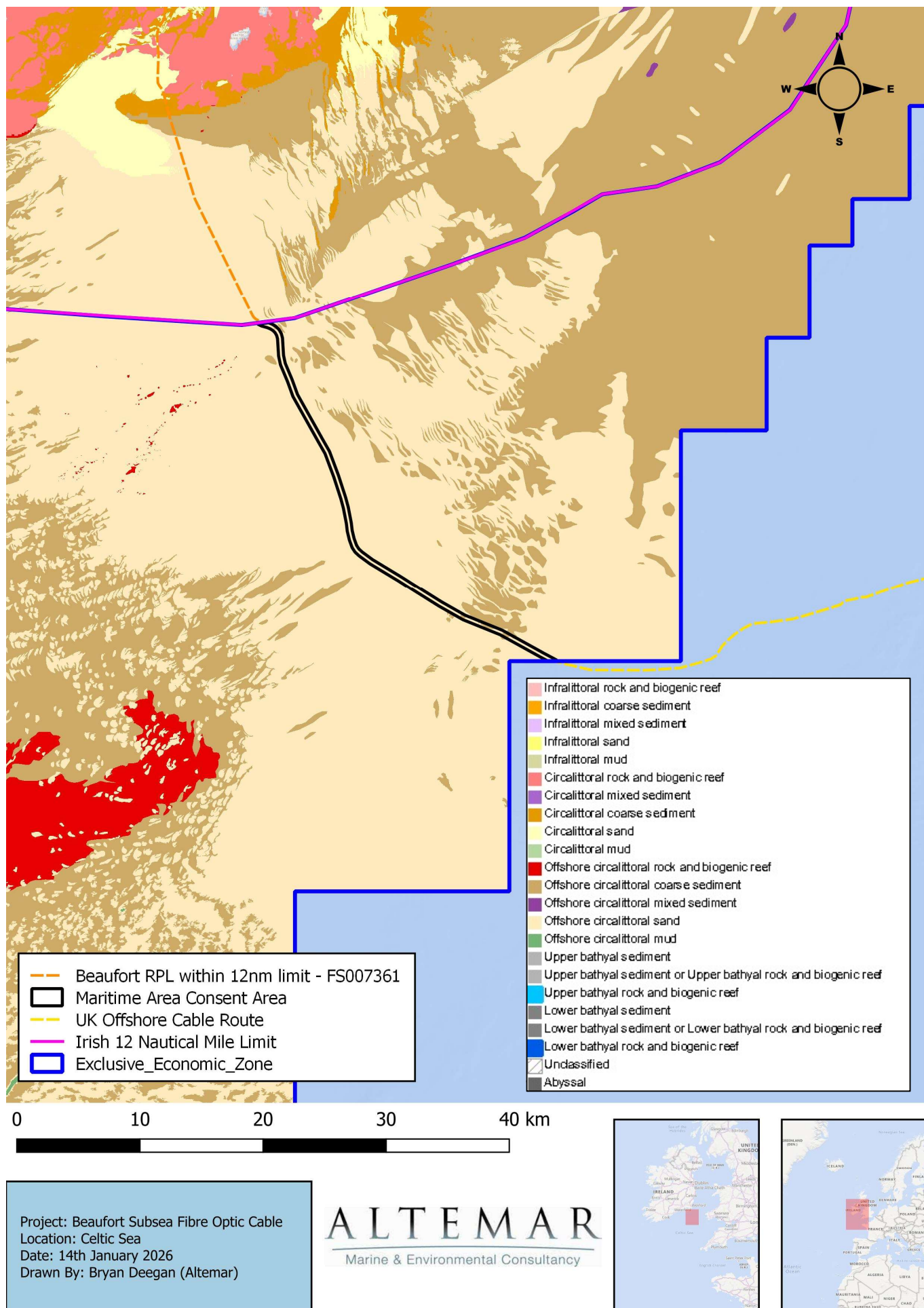


Figure 24. MSFD Benthic Boad Habitat Types along the Offshore Beaufort Cable Route (Primarily offshore circalittoral sand)

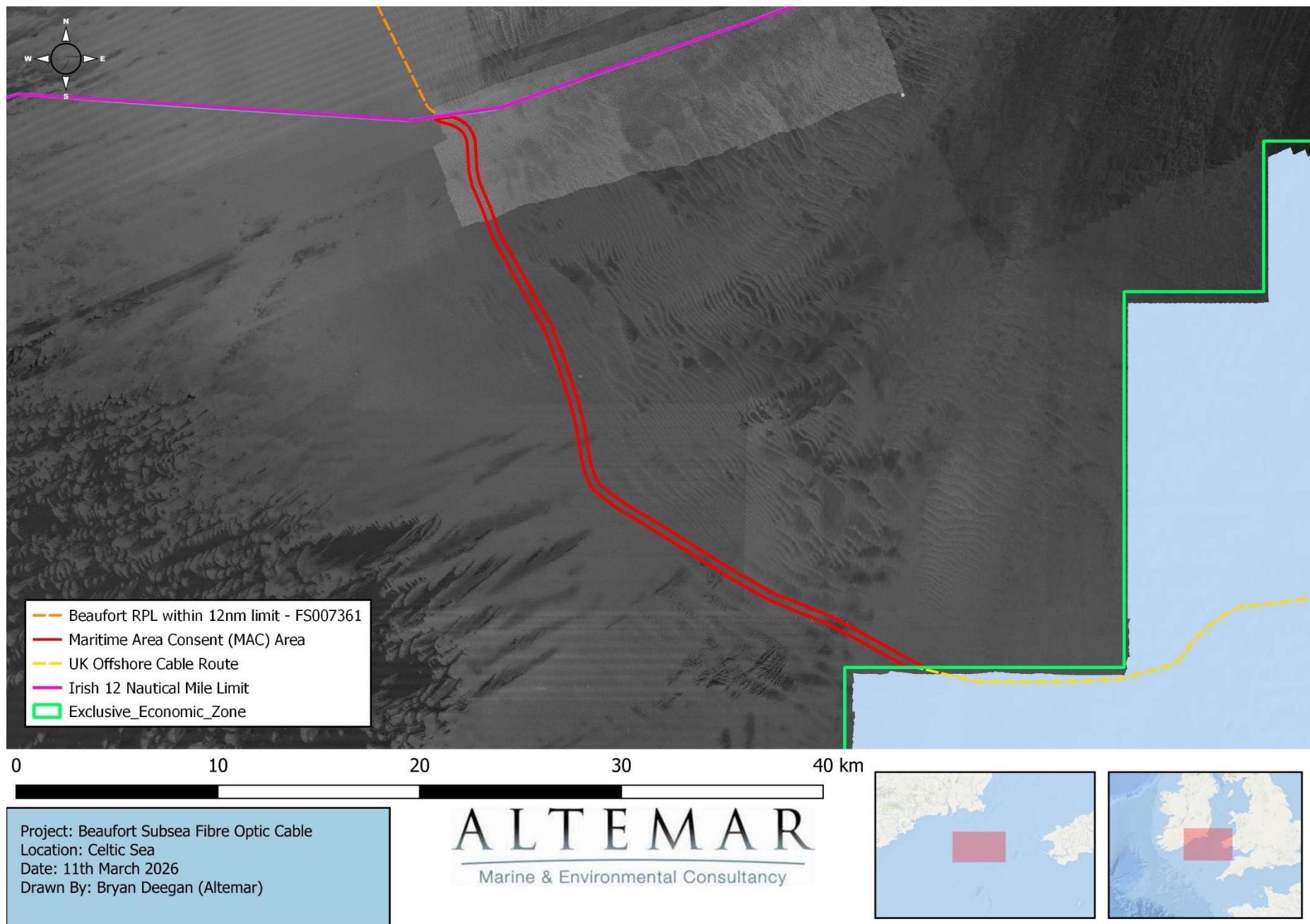


Figure 25. INFOMAR Backscatter along the Offshore Beaufort Cable Route

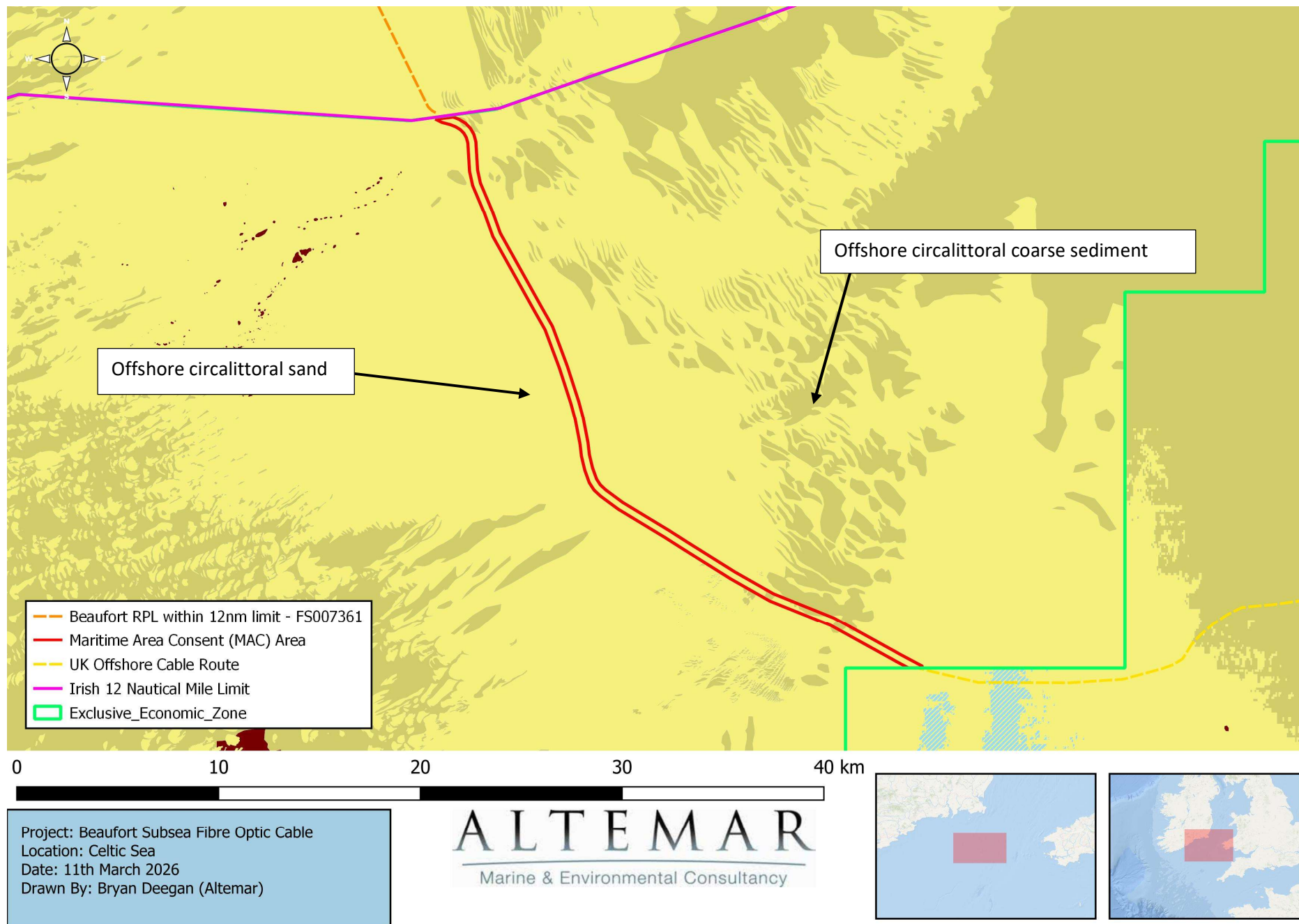


Figure 26. EUSeaMap (2025) Broad Scale Predictive Habitat Map along the Offshore Beaufort Cable Route

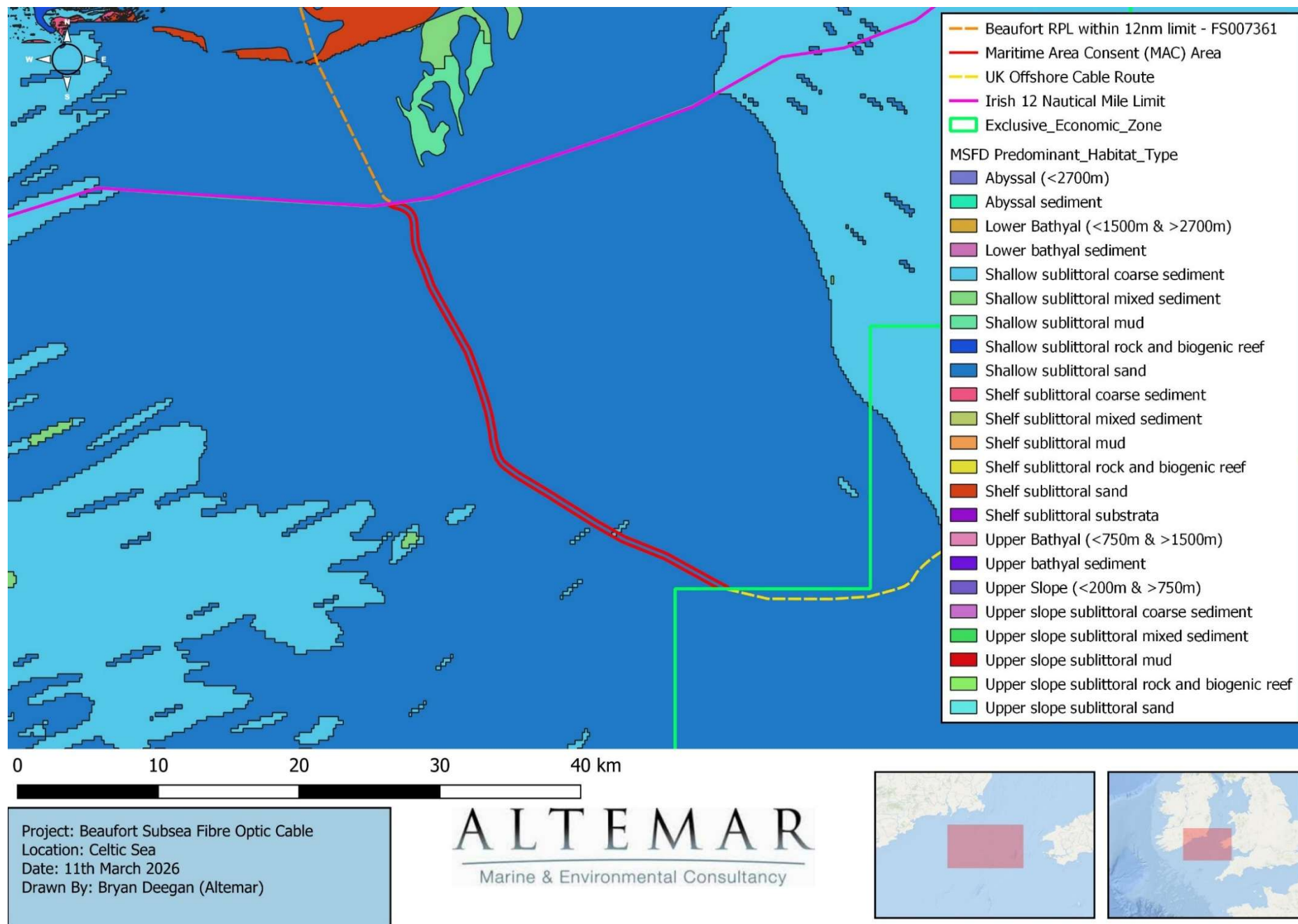


Figure 27. MSFD Predominant Habitat Types along the Offshore Beaufort Cable Route

5. Further Information on European Sites Screened in for NIS

5.1 IE Natura 2000 Sites

Saltee Islands SAC (Site code: 000707)

As outlined in the Saltee Islands SAC Site Synopsis⁶ (NPWS 2013):

'Great Saltee has a breeding population of Grey Seal, one of the very few in eastern Ireland. The breeding population was estimated at 571-744 individuals in 2005. A one-off moult count in 2007 gave a figure of 246 individuals.'

The Natura 2000 Standard Data Form (2020)⁷ states that:

'A long established breeding population of Halichoerus grypus and the only significant population in the south-east region.'

As outlined in the Conservation objectives supporting document – coastal habitats (NPWS, 2011)⁸:

'ANNEX II SPECIES

HALICHOERUS GRYPUS (GREY SEAL)

This marine mammal species occurs in estuarine, coastal and offshore waters but also utilises a range of intertidal and terrestrial habitats for important life history functions such as breeding, moulting, resting and social activity. Its aquatic range for foraging and inter-site movement extends predominantly into continental shelf and slope waters. Grey seal occupies both aquatic and terrestrial habitats in Saltee Islands SAC, including intertidal shorelines that become exposed during the tidal cycle and outlying rocky skerries when these are not inundated by wave action. It is present at the site throughout the year during all aspects of its annual life cycle which includes breeding (Aug-Dec approx.), moulting (Dec-April approx.) and non-breeding foraging and resting phases. In acknowledging the limited understanding of aquatic habitat use by the species within the site, it should be noted that all suitable aquatic habitat is considered relevant to the species' range and ecological requirements at the site and is therefore of potential use by grey seals.

Grey seals are vulnerable to disturbance during periods when time is spent ashore by individuals or groups of animals. This occurs immediately prior to and during the annual breeding season, which takes place predominantly during the months of August-December. Pups are born on land, usually on remote beaches and uninhabited islands or in sheltered caves. While there may be outliers in any year, specific established sites are used annually for breeding-associated behaviour by adult females, adult males, newborn pups and weaned pups. Such habitats are critical to the maintenance of the species within any site since pups are nursed there for a period of several weeks by the mother prior to weaning and abandonment. During this period, adult females also mate with adult males at or adjacent to breeding sites. In addition to delivering information on breeding dynamics, pup production (i.e. the number of pups born each year) can be measured or estimated in order to deliver an assessment of population size. However the relationship between pup production and total population size is not well known. An estimated 163 pups were born in Saltee Islands SAC in 2005. The corresponding minimum population estimate for the site numbered 571-734 grey seals of all ages. Known and suitable habitats for the species in Saltee Islands SAC during the breeding season are indicated in figure 6. Current breeding sites in Saltee Islands SAC are broadly as follows: Great Saltee Island and Little Saltee Island.

Grey seal also occurs at the site during the annual moult (i.e. hair shedding and replacement), a protracted period during which individual animals spend significant periods of days or weeks on the shore. Moulting is considered an intensive, energetically-demanding process that all seals must undergo, incurring further vulnerability for individuals during this period. Terrestrial or intertidal sites where seals can be found ashore are known as haul-out sites. Moult locations may be

⁶ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000707.pdf>

⁷ <https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF000707.pdf>

⁸ https://www.npws.ie/sites/default/files/publications/pdf/000707_Saltee%20Islands%20SAC%20Coastal%20Supporting%20Doc_V1.pdf

preferentially selected by the species. Those currently described in Ireland are remote from human habitation and interference, being on uninhabited islands or remote beaches, with specific established sites used annually by moulting adult females, adult males and juveniles. In Ireland the moulting phase in the annual life cycle occurs predominantly during the months of December to April. A minimum estimate of 246 grey seals was recorded at the site during the moult season in 2007. Known moult haul-out locations at the site are indicated in figure 7, broadly consisting of Great Saltee Island and the Coningmore Rocks.

Grey seal is a successful aquatic predator that feeds on a wide variety of fish and cephalopod species. For individual grey seals of all ages, intervals between foraging trips in coastal or offshore waters are spent resting ashore at terrestrial or intertidal haul-out sites, or in the water. Resting locations selected by grey seals may be more variable and dispersed than those used during the breeding or moulting seasons. While outliers may occur for very small numbers of animals, there is nevertheless a tendency for recurrent selection by grey seal of particular habitats and sites for terrestrial/intertidal resting behaviour (e.g., low-lying rocks and skerries). Known and suitable habitats for resting by the species are indicated in figure 8. Current sites described in Saltee Islands SAC are broadly as follows: Great Saltee Island, Little Saltee Island, the Coningmore Rocks and The Brandies.'

'Objective - To maintain the favourable conservation condition of grey seal in the Saltee Islands SAC, which is defined by the following list of attributes and targets

Target 1- Species range within the site should not be restricted by artificial barriers to site use.

- This target may be considered relevant to proposed activities or operations that will result in the permanent exclusion of grey seal from part of its range within the site, or will permanently prevent access for the species to suitable habitat therein.
- It does not refer to short-term or temporary restriction of access or range.
- Early consultation or scoping with the Department in advance of formal application is advisable for proposals that are likely to result in permanent exclusion.

Target 2- The breeding sites should be maintained in a natural condition.

- Target 2 is relevant to proposed activities or operations that will result in significant interference with or disturbance of (a) breeding behaviour by grey seal within the site and/or (b) aquatic/terrestrial/intertidal habitat used during the annual breeding season.
- Operations or activities that cause displacement of individuals from a breeding site or alteration of natural breeding behaviour, and that may result in higher mortality or reduced reproductive success, would be regarded as significant and should therefore be avoided.

Target 3- The moult haul-out sites should be maintained in a natural condition.

- Target 3 is relevant to proposed activities or operations that will result in significant interference with or disturbance of (a) moulting behaviour by grey seal within the site and/or (b) aquatic/terrestrial/intertidal habitat used during the annual moult.
- Operations or activities that cause displacement of individuals from a moult haul-out site or alteration of natural moulting behaviour to an extent that may ultimately interfere with key ecological functions would be regarded as significant and should therefore be avoided.

Target 4- The resting haul-out sites should be maintained in a natural condition.

- Target 4 is relevant to proposed activities or operations that will result in significant interference with or disturbance of (a) resting behaviour by grey seal within the site and/or (b) aquatic/terrestrial/intertidal habitat used for resting.
- Operations or activities that cause displacement of individuals from a resting haul-out site to an extent that may ultimately interfere with key ecological functions would be regarded as significant and should therefore be avoided.

Target 5- The grey seal population occurring within the site should contain adult, juvenile and pup cohorts annually.

- *Resting haul-out sites and the composition of haul-out groups may be different to those normally observed during breeding or moulting. There is some evidence of cohort-linked preferential selection by grey seals of terrestrial/intertidal sites elsewhere in Ireland.*
- *Whilst information is limited in Saltee Islands SAC at this time, disturbance at a specific location may have the effect of causing cohort-specific disturbance within the population. Population composition, whether in aquatic or terrestrial/intertidal habitats within the entire site or at individual locations, is likely to vary naturally within and between years.*
- *For the effective maintenance of the population, the above cohorts should be represented in the population occurring naturally within the site each year and any disturbance likely to cause such a cohort-specific effect should be carefully considered*

Target 6- *Human activities should occur at levels that do not adversely affect the grey seal population.*

- *Proposed activities or operations should not introduce man-made energy (e.g., aerial or underwater noise, light or thermal energy) at levels that could result in a significant negative impact on individuals and/or the population of grey seal within the site. This refers to both the aquatic and terrestrial/intertidal habitats used by the species in addition to important natural behaviours during the species' annual cycle.*
- *Target 6 also relates to proposed activities or operations that may result in the deterioration of key resources (e.g., water quality, feeding, etc) upon which grey seals depend. In the absence of complete knowledge on the species' ecological requirements in this site, such considerations should be assessed where appropriate on a case-by-case basis.'*

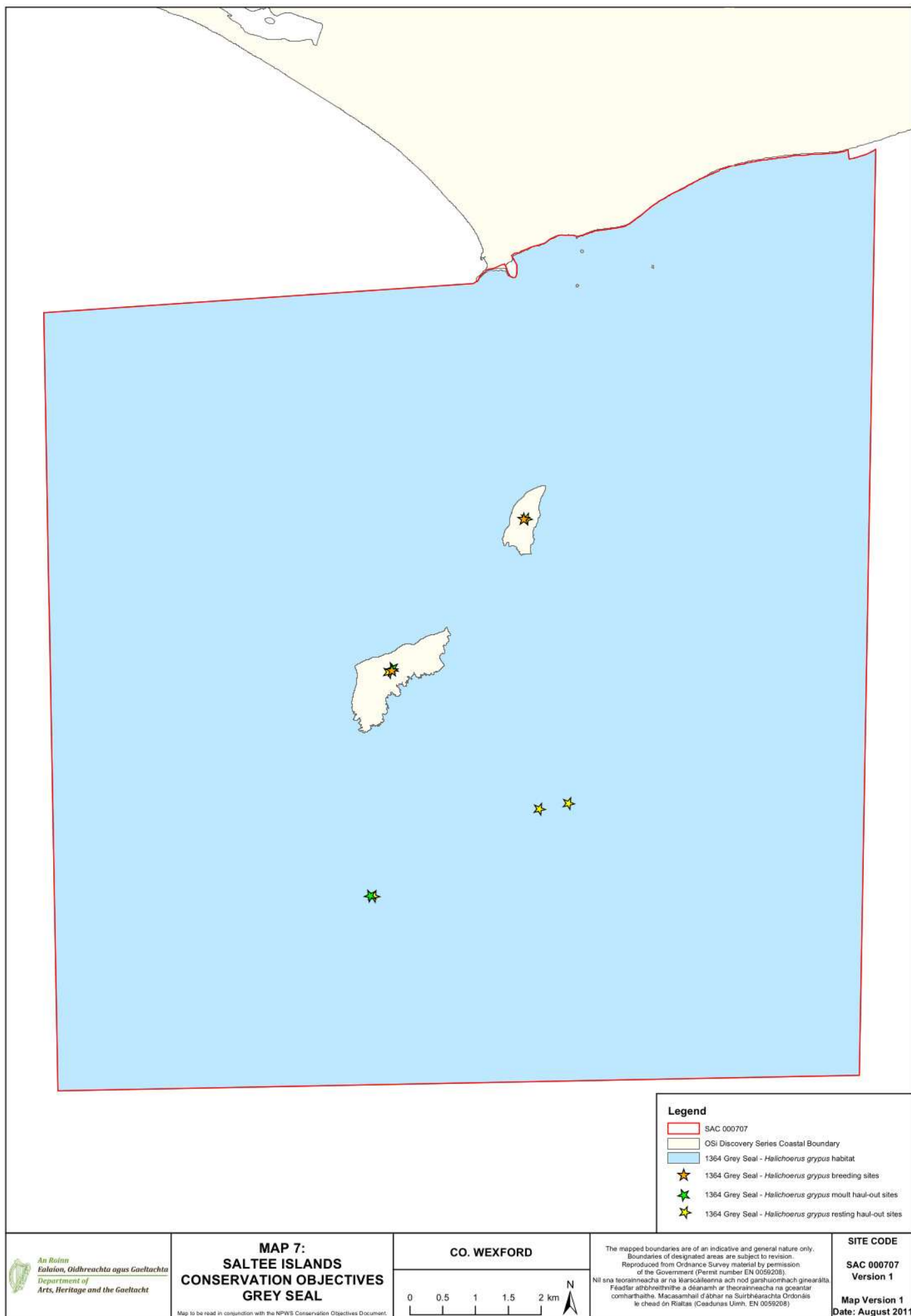


Figure 28. Location of Grey Seal in Saltee Islands SAC

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Saltee Islands SAC (Screened IN) are seen in Table 7.

Table 7. The site-specific Conservation Objectives, overall status of grey seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Saltee Islands SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	<i>Site Specific Conservation Objectives</i> , attributes, targets and perceived impacts.
[1140] Tidal Mudflats and Sandflats	Inadequate	To maintain the favourable conservation condition of Tidal mudflats and sandflats in the Saltee Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Habitat area:</i> The permanent habitat area is stable or increasing, subject to natural processes. <i>Community extent:</i> The following community should be maintained in a natural condition: Intertidal sand to muddy sand dominated polychaetes community complex. Potential Effect The proposed Beaufort Offshore Cable Works are located at a minimum of 16.5km from Saltee Islands SAC. Due to the scale and timing of the proposed works, and the distance from the proposed works to this SAC, in the absence of mitigation, there will be no significant effects on Tidal Mudflats and Sandflats from the proposed works.
[1160] Large shallow inlets and bays	Bad	To maintain the favourable conservation condition of Large shallow inlets and bays in the Saltee Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Habitat area:</i> The permanent habitat area is stable or increasing, subject to natural processes. <i>Community extent:</i> The following communities should be maintained in a natural condition: Coarse sediment with <i>Pomatoceros spp.</i> and <i>Pisidia longicornis</i> community. Potential Effect The proposed Beaufort Offshore Cable Works are located at a minimum of 16.5km from Saltee Islands SAC. Due to the scale and timing of the proposed works, and the distance from the proposed works to this SAC, in the absence of mitigation, there will be no significant effects on Large shallow inlets and bays from the proposed works.
[1170] Reefs	Bad	To maintain the favourable conservation condition of Reefs in the Saltee Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Distribution:</i> The distribution of reefs should remain stable, subject to natural processes. <i>Habitat area:</i> The permanent habitat area is stable, subject to natural processes. <i>Community structure:</i> The following reef community complexes should be maintained in a natural condition: Intertidal reef community complex; and Subtidal reef dominated by echinoderms and sponges community complex.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	<i>Site Specific Conservation Objectives</i> , attributes, targets and perceived impacts.
		<i>Community extent</i>: The extent of <i>Laminaria</i> dominated community should be conserved, subject to natural processes. <i>Community structure</i>: The biology of the <i>Laminaria</i> dominated community should be conserved, subject to natural processes. Potential Effect The proposed Beaufort Offshore Cable Works are located at a minimum of 16.5km from Saltee Islands SAC. Due to the scale and timing of the proposed works, and the distance from the proposed works to this SAC, in the absence of mitigation, there will be no significant effects on Reefs from the proposed works.
[1230] Vegetated Sea Cliffs	Inadequate	To maintain the favourable conservation condition of Vegetated Sea Cliffs in the Saltee Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Habitat length</i>: Area stable, subject to natural processes, including erosion. For sub-sites mapped: Great Saltee Island- 5.51km and Little Saltee Island- 3.11km. <i>Habitat distribution</i>: No decline, subject to natural processes. <i>Physical structure: functionality and hydrological regime</i>: No alteration to natural functioning of geomorphological and hydrological processes due to artificial structures. <i>Vegetation structure: zonation</i>: Maintain range of sea cliff habitat zonations including transitional zones, subject to natural processes including erosion and succession. <i>Vegetation structure: vegetation height</i>: Maintain structural variation within sward. <i>Vegetation composition: typical species and sub-communities</i>: Maintain range of sub- communities with typical species listed in the Irish Sea Cliff Survey (Barron et al., 2011). <i>Vegetation composition: negative indicator species</i>: Negative indicator species (including non-natives) to represent less than 5% cover. <i>Vegetation composition: bracken and woody species</i>: Cover of bracken (<i>Pteridium aquilinum</i>) on grassland less than 10%. Cover of woody species on grassland less than 20%. Potential Effect The proposed Beaufort Offshore Cable Works are located at a minimum of 16.5km from Saltee Islands SAC. Due to the scale and timing of the proposed works, and the distance from the proposed works to this SAC, in the absence of mitigation, there will be no significant effects on Vegetated Sea Cliffs from the proposed works.
Grey Seal (<i>Halichoerus grypus</i>) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in the Saltee Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat</i>: Species range within the site should not be restricted by artificial barriers to site use.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	<i>Site Specific Conservation Objectives</i> , attributes, targets and perceived impacts.
		<i>Breeding behaviour</i>: The breeding sites should be maintained in a natural condition. <i>Moulting behaviour</i>: The moult haul-out sites should be maintained in a natural condition. <i>Resting behaviour</i>: The resting haul-out sites should be maintained in a natural condition. <i>Population composition</i>: The grey seal population occurring within this site should contain adult, juvenile and pup cohorts annually. <i>Disturbance</i>: Human activities should occur at levels that do not adversely affect the grey seal population. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route (12nm-EEZ) is 16.5 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.
[8330] Submerged or partially submerged sea caves	Favourable	To maintain the favourable conservation condition of Submerged or partially submerged sea caves in the Saltee Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Distribution</i>: The distribution of sea caves should remain stable, subject to natural processes. <i>Community structure</i>: Human activities should occur at levels that do not adversely affect the ecology of sea caves. Potential Effect The proposed Beaufort Offshore Cable Works are located at a minimum of 16.5km from Saltee Islands SAC. Due to the scale and timing of the proposed works, and the distance from the proposed works to this SAC, in the absence of mitigation, there will be no significant effects on Submerged or partially submerged sea caves from the proposed works.

Slaney River Valley SAC 000781

The attributes and targets of harbour seal (screened in), and the potential impact of the proposed works on this feature of interest of Slaney River Valley SAC 000781 are seen in Table 8. All other features of interest were screened out at initial screening.

Table 8. The site-specific Conservation Objectives, overall status of harbour seal, and the potential impact of the proposed works on this feature of interest and conservation objectives of Slaney River Valley SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Harbour seal (<i>Phoca vitulina</i>) [1365]	Favourable	To maintain the favourable conservation condition of Harbour Seal in the Slaney River Valley SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> The breeding sites should be maintained in a natural condition. <i>Moulting behaviour:</i> The moult haul-out sites should be maintained in a natural condition. <i>Resting behaviour:</i> The resting haul-out sites should be maintained in a natural condition. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the harbour seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route within the Irish EEZ is 44.4 km from this SAC, which is within the foraging range (273km) of harbour seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Harbour Seal (see Section 6). Mitigation measures are required.

Rockabill to Dalkey Islands SAC 003000

The attributes and targets of harbour porpoise (Screened IN), and the potential impact of the proposed works on this feature of interest of Rockabill to Dalkey Islands SAC are seen in Table 9. All other features of interest were screened out at initial screening.

Table 9. The site-specific Conservation Objectives, overall status of harbour porpoise, and the potential impact of the proposed works on this feature of interest and conservation objectives of Rockabill to Dalkey Islands SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	<i>Site Specific Conservation Objectives</i> , attributes, targets and perceived impacts.
[1351] Harbour Porpoise (<i>Phocoena phocoena</i>)	Inadequate	To maintain the favourable conservation condition of Harbour porpoise in Rockabill to Dalkey Island SAC, which is defined by the following list of attributes and targets: <i>(Attribute. Target)</i> <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the harbour porpoise community at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the Celtic and Irish Seas MU for Harbour Porpoise, which includes this SAC (JNCC, 2023). Detailed assessment is required in relation to the potential effects on Harbour Porpoise (see Section 6). Mitigation measures are required.

Lambay Island SAC 000204

The attributes and targets of harbour porpoise (Screened IN), and the potential impact of the proposed works on this feature of interest of Lambay Island SAC are seen in Table 10. All other features of interest were screened out at initial screening.

Table 10. The site-specific Conservation Objectives, overall status of harbour seal and grey seal, and the potential impact of the proposed works on this feature of interest and conservation objectives of Lambay Island SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Grey Seal (<i>Halichoerus grypus</i>) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in Lambay Island SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> The breeding sites should be maintained in a natural condition. <i>Moulting behaviour:</i> The moult haul-out sites should be maintained in a natural condition. <i>Resting behaviour:</i> The resting haul-out sites should be maintained in a natural condition. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the grey seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 179 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.
Harbour seal (<i>Phoca vitulina</i>) [1365]	Favourable	To maintain the favourable conservation condition of Harbour Seal in Lambay Island SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> The breeding sites should be maintained in a natural condition. <i>Moulting behaviour:</i> The moult haul-out sites should be maintained in a natural condition. <i>Resting behaviour:</i> The resting haul-out sites should be maintained in a natural condition. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the harbour seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 179 km from this SAC, which is within the foraging range (273km) of harbour seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Harbour Seal (see Section 6). Mitigation measures are required.

Roaringwater Bay and Islands SAC (Site code: 000101)

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Roaringwater Bay and Islands SAC (Screened IN) are seen in Table 11. All other features of interest were screened out at initial screening.

Table 11. The site-specific Conservation Objectives, overall status of grey seal and harbour porpoise, and the potential impact of the proposed works on the features of interest and conservation objectives of Roaringwater Bay and Islands SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Grey Seal (Halichoerus grypus) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in Roaringwater Bay and Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> The breeding sites should be maintained in a natural condition. <i>Moulting behaviour:</i> The moult haul-out sites should be maintained in a natural condition. <i>Resting behaviour:</i> The resting haul-out sites should be maintained in a natural condition. <i>Population composition:</i> The grey seal population occurring within this site should contain adult, juvenile and pup cohorts annually. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the grey seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 196.3 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.
[1351] Harbour Porpoise (Phocoena phocoena)	Inadequate	To maintain the favourable conservation condition of Harbour Porpoise in Roaringwater Bay and Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the harbour porpoise community at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed works are located within the Celtic and Irish Seas MU for Harbour Porpoise, which includes this SAC (JNCC, 2023). Detailed assessment is required in relation to the potential effects on Harbour Porpoise (see Section 6). Mitigation measures are required.

Glengarriff Harbour and Woodland SAC (Site code: 000090)

The qualifying interests, their attributes, targets and the potential impact of the proposed cable survey area on each of the features of interest of Glengarriff Harbour and Woodland SAC (Screened IN) are seen in Table 12. All other features of interest were screened out at initial screening.

Table 12. The site-specific Conservation Objectives, overall status of harbour seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Glengarriff Harbour and Woodland SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
[1365] Harbour Seal (<i>Phoca vitulina</i>)	Favourable	To maintain the favourable conservation condition of Harbour Seal in Glengarriff Harbour and Woodland SAC, which is defined by the following list of attributes and targets: <i>(Attribute. Target)</i> <i>Access to suitable habitat.</i> Species range within the SAC should not be restricted by artificial barriers to site use. <i>Breeding behaviour.</i> Conserve the breeding sites in a natural condition. <i>Moulting behaviour:</i> Conserve the moult haulout sites in a natural condition. <i>Resting behaviour.</i> Conserve the resting haulout sites in a natural condition. <i>Disturbance.</i> Human activities should occur at levels that do not adversely affect the harbour seal population at the SAC. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 202.1 km from this SAC, which is within the foraging range (273 km) of harbour seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Harbour Seal (see Section 6). Mitigation measures are required.

Kenmare River SAC 002158

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Kenmare River SAC (Screened IN) are seen in Table 13. All other features of interest were screened out at initial screening.

Table 13. The site-specific Conservation Objectives, overall status of harbour seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Kenmare River SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
[1365] Harbour Seal (<i>Phoca vitulina</i>)	Favourable	To maintain the favourable conservation condition of Harbour Seal in Kenmare River SAC, which is defined by the following list of attributes and targets: <i>(Attribute. Target)</i> <i>Access to suitable habitat.</i> Species range is not restricted by artificial barriers to site use. <i>Breeding behaviour.</i> Conserve the breeding sites in a natural condition. <i>Moulting behaviour:</i> Conserve the moult haulout sites in a natural condition. <i>Resting behaviour.</i> Conserve the resting haulout sites in a natural condition. <i>Disturbance.</i> Human activities should occur at levels that do not adversely affect the harbour seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 205.8 km from this SAC, which is within the foraging range (273 km) of harbour seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Harbour Seal (see Section 6). Mitigation measures are required.

Galway Bay Complex SAC 000268

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Galway Bay Complex SAC (Screened IN) are seen in Table 14. All other features of interest were screened out at initial screening.

Table 14. The site-specific Conservation Objectives, overall status of harbour seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Galway Bay Complex SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
[1365] Harbour Seal (<i>Phoca vitulina</i>)	Favourable	To maintain the favourable conservation condition of Harbour Seal in Galway Bay Complex SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat.</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour.</i> Conserve the breeding sites in a natural condition. <i>Moulting behaviour:</i> Conserve the moult haulout sites in a natural condition. <i>Resting behaviour.</i> Conserve the resting haulout sites in a natural condition. <i>Disturbance.</i> Human activities should occur at levels that do not adversely affect the harbour seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 209.3 km from this SAC, which is within the foraging range (273 km) of harbour seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Harbour Seal (see Section 6). Mitigation measures are required.

Kilkieran Bay and Islands SAC 002111

The attributes and targets of harbour porpoise (Screened IN), and the potential impact of the proposed works on this feature of interest of Kilkieran Bay and Islands SAC are seen in Table 15. All other features of interest were screened out at initial screening.

Table 15. The site-specific Conservation Objectives, overall status of harbour seal & harbour porpoise, and the potential impact of the proposed works on this feature of interest and conservation objectives of Kilkieran Bay and Islands SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
[1365] Harbour Seal (<i>Phoca vitulina</i>)	Favourable	To maintain the favourable conservation condition of Harbour Seal in Kilkieran Bay and Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat.</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour.</i> Conserve the breeding sites in a natural condition. <i>Moulting behaviour:</i> Conserve the moult haulout sites in a natural condition. <i>Resting behaviour.</i> Conserve the resting haulout sites in a natural condition. <i>Disturbance.</i> Human activities should occur at levels that do not adversely affect the harbour seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 250.1 km from this SAC, which is within the foraging range (273 km) of harbour seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Harbour Seal (see Section 6). Mitigation measures are required.
[1351] Harbour Porpoise (<i>Phocoena phocoena</i>)	Inadequate	Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route within the Irish EEZ is located within the Celtic and Irish Seas MU for Harbour Porpoise, which includes this SAC (JNCC, 2023). Detailed assessment is required in relation to the potential effects on Harbour Porpoise (see Section 6). Mitigation measures are required.

The attributes and targets of grey seal and harbour porpoise, and the potential impact of the proposed works on these features of interest of Blasket Islands SAC are seen in Table 16. All other features of interest were screened out at initial screening.

Table 16. The site-specific Conservation Objectives, overall status of grey seal and harbour porpoise, and the potential impact of the proposed works on this feature of interest and conservation objectives of Blasket Islands SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Grey Seal (Halichoerus grypus) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in Blasket Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> The breeding sites should be maintained in a natural condition. <i>Moulting behaviour:</i> The moult haul-out sites should be maintained in a natural condition. <i>Resting behaviour:</i> The resting haul-out sites should be maintained in a natural condition. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the grey seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 265.7 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.
[1351] Harbour Porpoise (Phocoena phocoena)	Inadequate	To maintain the favourable conservation condition of Harbour Porpoise in Blasket Islands SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the harbour porpoise community at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is located within the Celtic and Irish Seas MU for Harbour Porpoise, which includes this SAC (JNCC, 2023). Detailed assessment is required in relation to the potential effects on Harbour Porpoise (see Section 6). Mitigation measures are required.

Slyne Head Islands SAC (Site code: 000328)

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Slyne Head Islands SAC (Screened IN) are seen in Table 17. All other features of interest were screened out at initial screening.

Table 17. The site-specific Conservation Objectives, overall status of grey seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Slyne Head Islands SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Grey Seal (Halichoerus grypus) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in Slyne Head Islands SAC, which is defined by the following list of attributes and targets: <i>(Attribute. Target)</i> <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> The breeding sites should be maintained in a natural condition. <i>Moulting behaviour:</i> The moult haul-out sites should be maintained in a natural condition. <i>Resting behaviour:</i> The resting haul-out sites should be maintained in a natural condition. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the grey seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 294.3 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.

Inishbofin and Inishshark SAC (Site code: 000278)

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Inishbofin and Inishshark SAC (Screened IN) are seen in Table 18. All other features of interest were screened out at initial screening.

Table 18. The site-specific Conservation Objectives, overall status of grey seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Inishbofin and Inishshark SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Grey Seal (Halichoerus grypus) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in Inishbofin and Inishshark SAC, which is defined by the following list of attributes and targets: <i>(Attribute. Target)</i> <i>Access to suitable habitat:</i> Species range within the SAC should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> The breeding sites should be maintained in a natural condition. <i>Moulting behaviour:</i> The moult haul-out sites should be maintained in a natural condition. <i>Resting behaviour:</i> The resting haul-out sites should be maintained in a natural condition. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the grey seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 303.9 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.

Slieve Tooley/Tormore Island/Loughros Beg Bay SAC (Site code: 000190)

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Slieve Tooley/Tormore Island/Loughros Beg Bay SAC (Screened IN) are seen in Table 19. All other features of interest were screened out at initial screening.

Table 19. The site-specific Conservation Objectives, overall status of grey seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Slieve Tooley/Tormore Island/Loughros Beg Bay SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Grey Seal (Halichoerus grypus) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in Slieve Tooley/Tormore Island/Loughros Beg Bay SAC, which is defined by the following list of attributes and targets: <i>(Attribute. Target)</i> <i>Access to suitable habitat:</i> Species range within the SAC should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> The breeding sites should be maintained in a natural condition. <i>Moulting behaviour:</i> The moult haul-out sites should be maintained in a natural condition. <i>Resting behaviour:</i> The resting haul-out sites should be maintained in a natural condition. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the grey seal population at the SAC. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 338 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.

Duvillaun Islands SAC (Site code: 000495)

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Duvillaun Islands SAC (Screened IN) are seen in Table 20. All other features of interest were screened out at initial screening.

Table 20. The site-specific Conservation Objectives, overall status of grey seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Duvillaun Islands SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Grey Seal (Halichoerus grypus) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in Duvillaun Islands SAC, which is defined by the following list of attributes and targets: <i>(Attribute. Target)</i> <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> Conserve the breeding sites in a natural condition. <i>Moulting behaviour:</i> Conserve the moult haulout sites in a natural condition. <i>Resting behaviour:</i> Conserve the resting haulout sites in a natural condition. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the grey seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 338.5 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.

Inishkea Islands SAC (Site code: 000507)

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Inishkea Islands SAC (Screened IN) are seen in Table 21. All other features of interest were screened out at initial screening.

Table 21. The site-specific Conservation Objectives, overall status of grey seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Inishkea Islands SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Grey Seal (Halichoerus grypus) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in Inishkea Islands SAC, which is defined by the following list of attributes and targets: <i>(Attribute. Target)</i> <i>Access to suitable habitat:</i> Species range within the SAC should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> Conserve the breeding sites in a natural condition. <i>Moulting behaviour:</i> Conserve the moult haulout sites in a natural condition. <i>Resting behaviour:</i> Conserve the resting haulout sites in a natural condition. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the grey seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 343.9 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.

Horn Head and Rinclevan SAC (Site code: 000147)

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Horn Head and Rinclevan SAC (Screened IN) are seen in Table 22. All other features of interest were screened out at initial screening.

Table 22. The site-specific Conservation Objectives, overall status of grey seal, and the potential impact of the proposed works on the features of interest and conservation objectives of Horn Head and Rinclevan SAC.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
Grey Seal (Halichoerus grypus) [1364]	Favourable	To maintain the favourable conservation condition of Grey Seal in Horn Head and Rinclevan SAC, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Access to suitable habitat:</i> Species range within the site should not be restricted by artificial barriers to site use. <i>Breeding behaviour:</i> Conserve the breeding sites in a natural condition. <i>Moulting behaviour:</i> Conserve the moult haulout sites in a natural condition. <i>Resting behaviour:</i> Conserve the resting haulout sites in a natural condition. <i>Population composition:</i> The grey seal population occurring within this site should contain adult, juvenile and pup cohorts annually. <i>Disturbance:</i> Human activities should occur at levels that do not adversely affect the grey seal population at the site. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed Beaufort Offshore Cable Route 12nm - Irish EEZ is 372.7 km from this SAC, which is within the foraging range (448km) of grey seal (Carter et al., 2022). Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.

Seas Off Wexford SPA (Site code: 004237)

As outlined in the Seas Off Wexford SPA Site Synopsis⁹ (2024):

The marine waters off the coast of County Wexford mark the boundary between the Irish and Celtic Seas. These waters constitute a valuable feeding resource for the seabirds that return every spring to Wexford's coastal and island colonies to breed. Outside of the summer months these relatively shallow coastal waters provide safe feeding and roosting opportunities for a range of marine birds overwintering here or on passage.

'The Seas off Wexford cSPA extends offshore along the majority of the county Wexford coastline and is approximately 3,054 km² in area. This SPA abuts, and is ecologically connected to, four breeding seabird SPAs namely Lady's Island Lake SPA, Wexford Harbour and Slobbs SPA, Keeragh Islands SPA and Saltee Islands SPA.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Common Scoter, Red-throated Diver, Fulmar, Manx Shearwater, Gannet, Shag, Cormorant, Kittiwake, Black-headed Gull, Mediterranean Gull, Lesser Black-backed Gull, Herring Gull, Little Tern, Roseate Tern, Common Tern, Arctic Tern, Sandwich Tern, Puffin, Razorbill and Guillemot.

The breeding seabird species listed [or, in the case of Mediterranean Gull at Lady's Island Lake SPA, under consideration for listing] for the SPAs which abut the Seas off Wexford cSPA are: Little Tern (Wexford Harbour and Slobbs SPA), Roseate Tern (Lady's Island Lake SPA), Common Tern (Lady's Island Lake SPA), Arctic Tern (Lady's Island Lake SPA), Sandwich Tern (Lady's Island Lake SPA), Black-headed Gull (Lady's Island Lake SPA), Mediterranean Gull (Lady's Island Lake SPA), Cormorant (Keeragh Islands SPA, Saltee Islands SPA), Fulmar (Saltee Islands SPA), Gannet (Saltee Islands SPA), Shag (Saltee Islands SPA), Lesser Black-backed Gull (Saltee Islands SPA), Herring Gull (Saltee Islands SPA), Kittiwake (Saltee Islands SPA), Guillemot (Saltee Islands SPA), Razorbill (Saltee Islands SPA) and Puffin (Saltee Islands SPA).

Based on a summer aerial marine bird survey conducted in 2021, an estimated 28,611 individuals occurred within this SPA. The following species formed a significant proportion (i.e. $\geq 1\%$) of the overall marine bird assemblage: Guillemot, 47.2%; Manx Shearwater, 28.9%; Razorbill, 9.6%; Sandwich Tern, 3.1%; Gannet, 2.7%; Herring Gull, 2.0%; Common Tern, 1.8% and Arctic Tern, 1.4%.

Based on a series of surveys focused on the northern section of this SPA during the non-breeding period of 2018/2019 population estimates of up to 1,078 Common Scoter, 499 Red-throated Diver and 180 Cormorant were recorded, all of which are of national importance.'

⁹ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004237.pdf>

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Seas Off Wexford SPA are seen in Table 23.

Table 23. The site-specific Conservation Objectives, overall status of species and habitats and the potential impact of the proposed works on the features of interest and conservation objectives of Seas Off Wexford SPA.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	<i>Site Specific Conservation Objectives</i> , attributes, targets and perceived impacts.
Red-throated Diver (<i>Gavia stellata</i>) [A001] Fulmar (<i>Fulmarus glacialis</i>) [A009] Manx Shearwater (<i>Puffinus puffinus</i>) [A013] Gannet (<i>Morus bassanus</i>) [A016] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018] Common Scoter (<i>Melanitta nigra</i>) [A065] Mediterranean Gull (<i>Larus melanocephalus</i>) [A176] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] Roseate Tern (<i>Sterna dougallii</i>) [A192] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Little Tern (<i>Sterna albifrons</i>) [A195] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200] Puffin (<i>Fratercula arctica</i>) [A204]	[A001] Amber; [A009] Green; [A013] Amber; [A016] Amber; [A017] Amber; [A018] Amber; [A065] Red; [A176] Amber; [A179] Red; [A183] Amber; [A184] Red; [A188] Amber; [A191] Amber; [A192] Amber; [A193] Amber; [A194] Amber; [A195] Amber; [A199] Amber; [A200] Amber; [A204] Amber;	To maintain/restore the favourable conservation condition of the qualifying interests in Seas Off Wexford SPA, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Breeding population size.</i> Long term SPA population trend is stable or increasing. <i>Spatial distribution:</i> Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population. <i>Forage spatial distribution, extent, abundance and availability:</i> Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target. <i>Disturbance across the site.</i> The intensity, frequency, timing and duration of disturbance occurs at levels that do not significantly impact the achievement of targets for population size and spatial distribution. <i>Barriers to connectivity:</i> The number, location, shape and area of barriers do not significantly impact the site population's access to the SPA or other ecologically important sites outside the SPA. Potential Effect The proposed works are located 1.1 km from this SPA. Proposed works are located exclusively within the marine subtidal between the Irish 12nm and EEZ. The proposed cable route is within an area of existing vessel traffic and fishing activity. Waters within this SPA constitute a feeding resource for breeding seabirds in spring and provide safe feeding opportunities for birds overwintering / on passage¹⁰. Given the minimum distance between the proposed works area and this SPA (1.1 km) and the nature of the proposed works, no significant impacts on water quality are foreseen. However, out of an abundance of caution, despite the limited temporal and geographic scale of the proposed project, it is considered that there is the potential for visual and acoustic disturbance (via the works vessel) impacts on seabirds protected as SCIs of this SPA which may be foraging / resting in waters along the proposed Beaufort Offshore Cable Route.

¹⁰ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004237.pdf>

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	<i>Site Specific Conservation Objectives</i> , attributes, targets and perceived impacts.
		Impacts on the SPA from the proposed Beaufort Offshore Cable works have the potential to impact on SCIs of this SPA. In the absence of mitigation measures, there is the potential for disturbance impacts on available foraging habitats for the following SCIs: – Red-throated Diver (<i>Gavia stellata</i>) [A001] – Fulmar (<i>Fulmarus glacialis</i>) [A009] – Manx Shearwater (<i>Puffinus puffinus</i>) [A013] – Gannet (<i>Morus bassanus</i>) [A016] – Cormorant (<i>Phalacrocorax carbo</i>) [A017] – Shag (<i>Phalacrocorax aristotelis</i>) [A018] – Common Scoter (<i>Melanitta nigra</i>) [A065] – Mediterranean Gull (<i>Larus melanocephalus</i>) [A176] – Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] – Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] – Herring Gull (<i>Larus argentatus</i>) [A184] – Kittiwake (<i>Rissa tridactyla</i>) [A188] – Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] – Roseate Tern (<i>Sterna dougallii</i>) [A192] – Common Tern (<i>Sterna hirundo</i>) [A193] – Arctic Tern (<i>Sterna paradisaea</i>) [A194] – Little Tern (<i>Sterna albifrons</i>) [A195] – Guillemot (<i>Uria aalge</i>) [A199] – Razorbill (<i>Alca torda</i>) [A200] – Puffin (<i>Fratercula arctica</i>) [A204] Mitigation measures are required to remove the potential for impacts on the SCIs of this SPA.

As outlined in the Saltee Islands SPA Site Synopsis¹¹ (2012):

'The Saltee Islands SPA is situated some 4-5 km off the coast of south Co. Wexford and comprises the two islands, Great Saltee and Little Saltee, and the surrounding seas both between them and to a distance of 500 m from them. The bedrock of the islands is of Precambrian gneiss and granite. Both islands have exposed rocky cliffs on their south and east – those on Great Saltee being mostly c. 30 m high, those on Little Saltee about half this height. The northern and western sides of both islands are fringed with shingle and boulder shores, backed by boulder clay cliffs, as well as small areas of intertidal sandflats. Sea caves occur at the base of the cliffs on Great Saltee.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Gannet, Cormorant, Shag, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill and Puffin. The site is also of special conservation interest for holding an assemblage of over 20,000 breeding seabirds.

The Saltee Islands are internationally important for holding an assemblage of over 20,000 breeding seabirds. The nationally important Gannet colony on Great Saltee has been well documented since its establishment in the 1920s and 2,446 pairs were present in 2004. The following species have populations of national importance (all counts in the 1998-2000 breeding seasons): Fulmar (520 pairs), Cormorant (273 pairs), Shag (268 pairs), Lesser Black-backed Gull (164 pairs), Herring Gull (73 pairs), Kittiwake (2,125 pairs), Guillemot (14,362 pairs), Razorbill (2,505 pairs) and Puffin (1,822 pairs). An estimated 250 pairs of Manx Shearwater occur on these islands. Seabird populations are monitored annually and large numbers of chicks, especially of Gannets, auks and Shags, are ringed.

Peregrine Falcon breeds (1-2 pairs) and Chough (1 pair) occurs at the eastern edge of its Irish range. Hen Harrier uses the site for autumn passage and overwintering.

Great Saltee is a major site for spring and autumn landbird migration and was the site for Ireland's first bird observatory. While the observatory is no longer operational, substantial numbers of migrants are still ringed annually. Large numbers of pipits, swallows and martins, thrushes, warblers and finches occur, while smaller numbers of a great variety of other species (some very rare in Ireland) are also recorded.

The Saltee Islands SPA is of international importance for breeding seabirds; it also supports populations of three species that are listed on Annex I of the E.U. Birds Directive, i.e. Peregrine, Chough and Hen Harrier. It is one of the best-documented sites in the country and is monitored annually.'

The Natura 2000 Standard Data Form (2020)¹² states that:

'The site comprises the two Saltee Islands (Great Saltee and Little Saltee) which are situated between 4 and 5 km off the south Wexford coast. The bedrock is metamorphic schist and gneiss. The islands are exposed to prevailing wind and swells from the west. The islands were inhabited and farmed in the past but are now abandoned, although some sheep grazing occurs on Little Saltee. A community dominated by Pteridium aquilinum is the main vegetation type on the islands. Dry grassland occurs within the old field boundaries. Good examples of vegetated cliff habitat with a typical south-eastern flora occur on both islands. The shorelines vary from rocky cliffs of moderate height to shingle, sand and boulder shores. Small sections of boulder clay cliffs are exposed in places. Sea caves are found in several parts of the site. Other habitats present include springs, flushes and scrub. The site includes an area of the surrounding seas to a distance of 500 m from the shoreline where seabirds feed, bathe and socialise.

The Saltee Islands support one of the most important seabird colonies in the country (for populations and species diversity) and hold the most important colony in the south-east for populations and species diversity. The site is nationally important for eleven seabird species: Fulmarus glacialis, Sula bassana, Phalacrocorax carbo, Phalacrocorax aristotelis, Larus fuscus, Larus marinus, Larus argentatus, Uria aalge, Alca torda, Rissa tridactyla and Fratercula arctica. The islands, especially Great Saltee, have a long-established seabird monitoring programme, and in particular the growth of the Sula bassana colony since its establishment in the 1920s has been well documented. There is a long-term seabird ringing programme in operation. Pyrrhocorax pyrrhocorax occurs at the eastern edge of its Irish range and Falco peregrinus breeds. Great Saltee is a major site for spring and autumn landbird migration and the island formerly had a bird observatory. Ringing of migrants still takes place.'

¹¹ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004002.pdf>

¹² <https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF004002.pdf>

The qualifying interests, their attributes, targets and the potential impact of the proposed works on each of the features of interest of Saltee Islands SPA are seen in Table 247.

Table 24. The site-specific Conservation Objectives, overall status of species and habitats and the potential impact of the proposed works on the features of interest and conservation objectives of Saltee Islands SPA.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	<i>Site Specific Conservation Objectives</i> , attributes, targets and perceived impacts.
Fulmar (<i>Fulmarus glacialis</i>) [A009] Gannet (<i>Morus bassanus</i>) [A016] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Razorbill (<i>Alca torda</i>) [A200] Puffin (<i>Fratercula arctica</i>) [A204]	[A009] Green; [A016] Amber; [A017] Amber; [A018] Amber; [A0183] Amber; [A184] Red; [A188] Amber; [A199] Amber; [A200] Amber; [A204] Amber;	To maintain/restore the favourable conservation condition of the qualifying interests in Saltee Islands SPA, which is defined by the following list of attributes and targets: (Attribute. Target) <i>Breeding population abundance: apparently occupied sites (AOSs).</i> No significant decline. <i>Productivity rate:</i> No significant decline <i>Distribution: breeding colonies:</i> No significant decline <i>Prey biomass available:</i> No significant decline <i>Barriers to connectivity:</i> No significant increase. <i>Disturbance at the breeding site:</i> No significant increase. <i>Disturbance at marine areas immediately adjacent to the colony:</i> No significant increase. Potential Effect This SPA is located approximately 21 km from the proposed works. Proposed works are located exclusively within the marine subtidal between the Irish 12nm and EEZ. The proposed cable route is within an area of existing vessel traffic and fishing activity. Waters proximate to the Beaufort Offshore Cable Route constitute a feeding resource for breeding seabirds in spring and provide safe feeding opportunities for birds overwintering / on passage. Given the minimum distance between the proposed works area and this SPA (21 km) and the nature of the proposed works, no significant impacts on water quality are foreseen. However, out of an abundance of caution, despite the limited temporal and geographic scale of the proposed project, it is considered that there is the potential for visual and acoustic disturbance (via the works vessel) impacts on seabirds protected as SCIs of this SPA which may be foraging / resting in waters along the proposed Beaufort Offshore Cable Route in the absence of mitigation. Impacts on the SPA from the proposed Beaufort Offshore Cable works have the potential to impact on SCIs of this SPA. In the absence of mitigation measures, there is the potential for disturbance impacts (<i>Disturbance at marine areas immediately adjacent to the colony</i>) on available foraging habitats for the following SCIs: – Fulmar (<i>Fulmarus glacialis</i>) [A009]

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives, attributes, targets and perceived impacts.
		– Gannet (<i>Morus bassanus</i>) [A016] – Cormorant (<i>Phalacrocorax carbo</i>) [A017] – Shag (<i>Phalacrocorax aristotelis</i>) [A018] – Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] – Herring Gull (<i>Larus argentatus</i>) [A184] – Kittiwake (<i>Rissa tridactyla</i>) [A188] – Guillemot (<i>Uria aalge</i>) [A199] – Razorbill (<i>Alca torda</i>) [A200] – Puffin (<i>Fratercula arctica</i>) [A204] Mitigation measures are required to remove the potential for impacts on the SCIs of this SPA.

5.2 UK SACs Designated for Harbour Porpoise

The potential impact of the proposed fibre-optic cable on the features of interest (screened in) of the following sites designated for harbour porpoise are seen in Table 25:

- Bristol Channel Approaches/Dynesfeydd Môr Hafren (**UK0030396**)
- West Wales Marine / Gorllewin Cymru Forol (**UK0030397**)
- North Anglesey Marine/Gogledd Môn Forol (**UK0030398**)
- North Channel (**UK0030399**)

Table 25. The site-specific Conservation Objectives, overall status of harbour porpoise, and the potential impact of the proposed works on this feature of interest and conservation objectives of the above sites.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives and perceived impacts.
[1351] Harbour Porpoise (<i>Phocoena phocoena</i>)	Favourable	Ensuring: 1. Harbour porpoise are a viable component of the site. 2. There is no significant disturbance of the species. 3. The condition of supporting habitats and processes, and the availability of prey is maintained. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed works area is located within the Celtic and Irish Seas MU for Harbour Porpoise, which includes the following UK SACs (JNCC, 2023): • Bristol Channel Approaches/Dynesfeydd Môr Hafren (UK0030396) • West Wales Marine / Gorllewin Cymru Forol (UK0030397) • North Anglesey Marine/Gogledd Môn Forol (UK0030398) • North Channel (UK0030399) Detailed assessment is required in relation to the potential effects on Harbour Porpoise (see Section 6). Mitigation measures are required.

5.3 UK SACs Designated for Grey Seal

The potential impact of the proposed fibre-optic cable on these features of interest (screened in) of the following sites designated for grey seal are seen in Table 26:

- Isles of Scilly Complex (**UK0013694**)
- Pembrokeshire Marine / Sir Benfro Forol (**UK0013116**)
- Lundy (**UK0013114**)
- Cardigan Bay / Bae Ceredigion (**UK0012712**)
- Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau (**UK0013117**)
- The Maidens (**UK0030384**)
- Humber Estuary (**UK0030170**)

Table 26. The site-specific Conservation Objectives, overall status of grey seal, and the potential impact of the proposed works on this feature of interest and conservation objectives of the above sites.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives and perceived impacts.
[1364] Grey Seal (<i>Halichoerus grypus</i>)	Favourable	To maintain / restore the favourable conservation condition of Grey Seal. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed works area is located within the 448km foraging range of grey seal (Carter et al., 2022), which includes the following SACs where Grey Seal are a feature of interest: • Isles of Scilly Complex (UK0013694) • Pembrokeshire Marine / Sir Benfro Forol (UK0013116) • Lundy (UK0013114) • Cardigan Bay / Bae Ceredigion (UK0012712) • Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau (UK0013117) • The Maidens (UK0030384) • Humber Estuary (UK0030170) Detailed assessment is required in relation to the potential effects on Grey Seal (see Section 6). Mitigation measures are required.

5.4 UK SACs Designated for Harbour Seal

The potential impact of the proposed fibre-optic cable survey on the following site designated for harbour seal are seen in Table 27:

- Murlough (UK0016612)

Table 27. The site-specific Conservation Objectives, overall status of harbour seal, and the potential impact of the proposed works on this feature of interest and conservation objectives of the above site.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives and perceived impacts.
[1351] Harbour Seal (<i>Phoca vitulina</i>)	Unfavourable - Inadequate	To maintain / restore the favourable conservation condition of Harbour Seal. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed works are located within the 273km foraging range of harbour seal (Carter et al., 2022), which includes the following SAC: • Murlough (UK0016612) Detailed assessment is required in relation to the potential effects on Harbour Seal (see Section 6). Mitigation measures are required.

5.5 French SACs Designated for Harbour Porpoise

The potential effects of the proposed fibre-optic cable on these features of interest of the following sites designated for harbour porpoise are seen in Table 28:

- Nord Bretagne DH (**FR2502022**)
- Récifs et landes de la Hague (**FR2500084**)
- Anse de Vauville (**FR2502019**)
- Mers Celtiques – Talus du golfe de Gascogne (**FR5302015**)
- Banc et récifs de Surtainville (**FR2502018**)
- Côte de Granit rose-Sept-Iles (**FR5300009**)
- Trégor – Goëlo (**FR5300010**)
- Baie de Morlaix (**FR5300015**)
- Abers – Côtes des legends (**FR5300017**)
- Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay (**FR5300008**)
- Cap d’Erquy-Cap Fréhel (**FR5300011**)
- Ouessant-Molène (**FR5300018**)
- Chausey (**FR2500079**)
- Baie de Saint-Brieuc – Est (**FR5300066**)
- Côtes de Crozon (**FR5302006**)
- Baie du Mont Saint-Michel (**FR2500077**)
- Baie de Lancieux, Baie de l’Arguenon, Archipel de Saint Malo et Dinard (**FR5300012**)
- Estuaire de la Rance (**FR5300061**)
- Chaussée de Sein (**FR5302007**)
- Récifs du talus du golfe de Gascogne (**FR5302016**)

Table 28. The site-specific Conservation Objectives, overall status of harbour porpoise, and the potential impact of the proposed works on this feature of interest (screened in) and conservation objectives of the above sites.

Annex Species/Habitats- Qualifying Interest	Overall EU Conservation Status	Site Specific Conservation Objectives and perceived impacts.
[1351] Harbour Porpoise (Phocoena phocoena)	Poor	To maintain (or restore where appropriate) the qualifying interests to favourable condition. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed works area is located within the Celtic and Irish Seas MU for Harbour Porpoise, which also includes the following SACs (JNCC, 2023): • Nord Bretagne DH (FR2502022) • Récifs et landes de la Hague (FR2500084) • Anse de Vauville (FR2502019) • Mers Celtiques – Talus du golfe de Gascogne (FR5302015) • Banc et récifs de Surtainville (FR2502018) • Côte de Granit rose-Sept-Iles (FR5300009) • Trégor – Goëlo (FR5300010) • Baie de Morlaix (FR5300015) • Abers – Côtes des legends (FR5300017) • Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay (FR5300008) • Cap d’Erquy-Cap Fréhel (FR5300011) • Ouessant-Molène (FR5300018) • Chausey (FR2500079) • Baie de Saint-Brieuc – Est (FR5300066)

Annex Species/Habitats- Qualifying Interest	Overall EU Conservation Status	<i>Site Specific Conservation Objectives</i> and perceived impacts.
		• Côtes de Crozon (FR5302006) • Baie du Mont Saint-Michel (FR2500077) • Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard (FR5300012) • Estuaire de la Rance (FR5300061) • Chaussée de Sein (FR5302007) • Récifs du talus du golfe de Gascogne (FR5302016) Detailed assessment is required in relation to the potential effects on Harbour Porpoise (see Section 6). Mitigation measures are required.

5.7 French SACs Designated for Grey Seal

The potential impact of the proposed fibre-optic cable on the following sites designated for grey seal are seen in Table 29:

- Ouessant-Molène (**FR5300018**)
- Abers – Côtes des legends (**FR5300017**)
- Chaussée de Sein (**FR5302007**)
- Anse de Goulven, dunes de Keremma (**FR5300016**)
- Baie de Morlaix (**FR5300015**)
- Côte de Granit rose-Sept-Iles (**FR5300009**)
- Côtes de Crozon (**FR5302006**)
- Rade de Brest, estuarie de l'Aulne (**FR5300046**)
- Cap Sizun (**FR5310055**)
- Trégor – Goëlo (**FR5300010**)
- Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay (**FR5300008**)
- Baie d'Audieme (**FR5310056**)
- Récifs et landes de la Hague (**FR2500084**)
- Anse de Vauville (**FR2502019**)
- Baie de Saint-Brieuc – Est (**FR5300066**)
- Banc et récifs de Surtainville (**FR2502018**)
- Chausey (**FR2500079**)
- Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire (**FR2500085**)
- Littoral Ouest du Cotentin de Bréhal à Pirou (**FR2500080**)
- Marais du Cotentin et du Bessin – Baie des Veys (**FR2500088**)
- Baie de Seine occidentale (**FR2502020**)
- Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard (**FR5300012**)

Table 29. The site-specific Conservation Objectives, overall status of grey seal, and the potential impact of the proposed works on this feature of interest (screened in) and conservation objectives of the above sites.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	<i>Site Specific Conservation Objectives</i> and perceived impacts.
[1364] Grey Seal (<i>Halichoerus grypus</i>)	Good	To maintain (or restore where appropriate) the qualifying interests to favourable condition. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed works area is located within the 448km foraging range of grey seal (Carter et al., 2022), which also includes the following SACs where Grey Seal are a feature of interest: • Ouessant-Molène (FR5300018) • Abers – Côtes des legends (FR5300017) • Chaussée de Sein (FR5302007) • Anse de Goulven, dunes de Keremma (FR5300016) • Baie de Morlaix (FR5300015) • Côte de Granit rose-Sept-Iles (FR5300009) • Côtes de Crozon (FR5302006) • Rade de Brest, estuarie de l’Aulne (FR5300046) • Cap Sizun (FR5310055) • Trégor – Goëlo (FR5300010) • Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay (FR5300008) • Baie d’Audieme (FR5310056) • Récifs et landes de la Hague (FR2500084) • Anse de Vauville (FR2502019) • Baie de Saint-Brieuc – Est (FR5300066) • Banc et récifs de Surtainville (FR2502018) • Chausey (FR2500079) • Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire (FR2500085) • Littoral Ouest du Cotentin de Bréhal à Pirou (FR2500080) • Marais du Cotentin et du Bessin – Baie des Veys (FR2500088) • Baie de Seine occidentale (FR2502020) • Baie de Lancieux, Baie de l’Arguenon, Archipel de Saint Malo et Dinard (FR5300012) Detailed assessment is required in relation to the potential effects on grey seal (see Section 6). Mitigation measures are required.

5.8 French SACs Designated for Bottlenose Dolphin

The potential effects of the proposed works on these features of interest of the following sites designated for bottlenose dolphin are seen in Table 30:

- Mers Celtiques – Talus du golfe de Gascogne (**FR5302015**)
- Récifs du talus du golfe de Gascogne (**FR5302016**)
- Nord Bretagne DH (**FR2502022**)
- Ouessant-Molène (**FR5300018**)
- Abers – Côtes des legends (**FR5300017**)
- Chaussée de Sein (**FR5302007**)
- Côte de Granit rose-Sept-Iles (**FR5300009**)
- Trégor – Goëlo (**FR5300010**)
- Récifs et landes de la Hague (**FR2500084**)
- Anse de Vauville (**FR2502019**)
- Baie de Saint-Brieuc – Est (**FR5300066**)
- Cap d’Erquy-Cap Fréhel (**FR5300011**)
- Banc et récifs de Surtainville (**FR2502018**)
- Baie de Lancieux, Baie de l’Arguenon, Archipel de Saint Malo et Dinard (**FR5300012**)
- Chausey (**FR2500079**)
- Baie du Mont Saint-Michel (**FR2500077**)
- Côte de Cancale à Parmè (**FR5300052**)
- Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire (**FR2500085**)
- Baie de Seine occidentale (**FR2502020**)
- Baie de Seine orientale (**FR2502021**)
- Littoral Cauchois (**FR2300139**)
- Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant (**FR3100478**)

Table 30. The site-specific Conservation Objectives, overall status of bottlenose dolphin, and the potential impact of the proposed works on this feature of interest (screened in) and conservation objectives of the above sites.

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	Site Specific Conservation Objectives and perceived impacts.
[1349] Bottlenose Dolphin (<i>Tursiops truncatus</i>)	Poor	To maintain (or restore where appropriate) the qualifying interests to favourable condition. Potential Effect The proposed works will introduce underwater noise into the marine environment. The proposed works area is located within the Irish Sea, and Offshore Channel, Celtic Sea & SW England MU’s for bottlenose dolphin (JNCC, 2023), which includes the following French SACs: • Mers Celtiques – Talus du golfe de Gascogne (FR5302015) • Récifs du talus du golfe de Gascogne (FR5302016) • Nord Bretagne DH (FR2502022) • Ouessant-Molène (FR5300018) • Abers – Côtes des legends (FR5300017) • Chaussée de Sein (FR5302007) • Côte de Granit rose-Sept-Iles (FR5300009) • Trégor – Goëlo (FR5300010) • Récifs et landes de la Hague (FR2500084) • Anse de Vauville (FR2502019) • Baie de Saint-Brieuc – Est (FR5300066) • Cap d’Erquy-Cap Fréhel (FR5300011)

Annex Species/Habitats- Qualifying Interest	Overall Conservation Status	<i>Site Specific Conservation Objectives</i> and perceived impacts.
		• Banc et récifs de Surtainville (FR2502018) • Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard (FR5300012) • Chausey (FR2500079) • Baie du Mont Saint-Michel (FR2500077) • Côte de Cancale à Parmè (FR5300052) • Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire (FR2500085) • Baie de Seine occidentale (FR2502020) • Baie de Seine orientale (FR2502021) • Littoral Cauchois (FR2300139) • Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant (FR3100478) Detailed assessment is required in relation to the potential effects on bottlenose dolphin (see Section 6). Mitigation measures are required.

6. Further information on the potential effects on Cetaceans and Pinnipeds

Grey Seal

Saltee Islands have been identified as the location of a key colony and an important breeding area for Grey Seal populations in the Republic of Ireland. Outlined below are surveys and studies undertaken by NPWS in relation to Grey Seal populations in the vicinity of Kilmore Quay and Saltee Islands.

As outlined in the “Grey seal moult population survey in the Republic of Ireland, 2007”¹³:

Grey Seal Distribution Recorded During Moulting Surveys

Data gathered during February and March 2007 indicated that moulting grey seals were particularly concentrated along the Atlantic coastline of Ireland in Counties Kerry, Galway, Mayo and Donegal (Fig. 54). However, nationally-significant haul-out groups were also recorded at key sites off the coasts of Co. Cork, Co. Dublin and Co. Wexford (Appendix III). The research also indicated that national grey seal distribution ashore during the moult season may be somewhat narrower than that observed during breeding (Fig. 54), when the recording of newborn pups is the primary focus of survey effort (Ó Cadhla et al., 2007). Such differences were most apparent in haul-out data from Counties Galway, Mayo and Donegal (Appendix III).

Minimum Population Estimates in March 2007

Based on count data obtained by means of aerial survey imagery and a small number of real time counts, the minimum population estimate delivered by the survey programme was as follows:

Republic of Ireland moult population estimate, 2007 = 5,343 grey seals

Two islands – Inishkea North, Co. Mayo and the Great Blasket Island, Co. Kerry, contained over 45% of all grey seals recorded nationally during the moult survey. Large haul-out group sizes of over 900 animals were recorded on large sheltered sandy beaches at each of these islands (Appendix III). In total 27.7% of all grey seals recorded during the nationwide survey (Fig. 55) were located at Inishkea North, most centred about a site known as ‘the Dock’ (Plate 2). The Inishkea Group as a whole contained a minimum estimate of 1,882 grey seals on 2nd March – over 35% of the national figure.

*Other haul-out group sizes noteworthy in a regional context (Fig. 2; Appendix III) were recorded at Low Island, the West Calf Island (Plate 3) and Carbery Island (Co. Cork), Ferroon Rocks, Chapel Island & Inishgort (Co. Galway), Inishkea South & Inishkeeragh (Co. Mayo), Slievetooley (within Location 109: Glenlough to Maghera) & Inishtrahull (Plate 4; Co. Donegal), St. Patrick’s Island & Lambay Island (Co. Dublin), and Raven Point & **Great Saltee Island (Co. Wexford).** (Emphasis added)*

Terrestrial habitats used by moulting grey seals around the Irish coastline varied from rocky skerries (e.g. Bomore, Co. Sligo), island coastlines consisting of rock ledges and outcrops to sand beaches and sandbanks (e.g. Ballisadare Bay, Co. Sligo; Raven Point, Co. Wexford). In two cases (Ferroon Rocks and Glassillan, Co. Galway), haul-out groups were recorded on the grassy summits of islands.

¹³[https://www.npws.ie/sites/default/files/publications/pdf/OCadhla & Strong 2007 Grey Seal Moult Survey.pdf](https://www.npws.ie/sites/default/files/publications/pdf/OCadhla%20&%20Strong%202007%20Grey%20Seal%20Moult%20Survey.pdf)

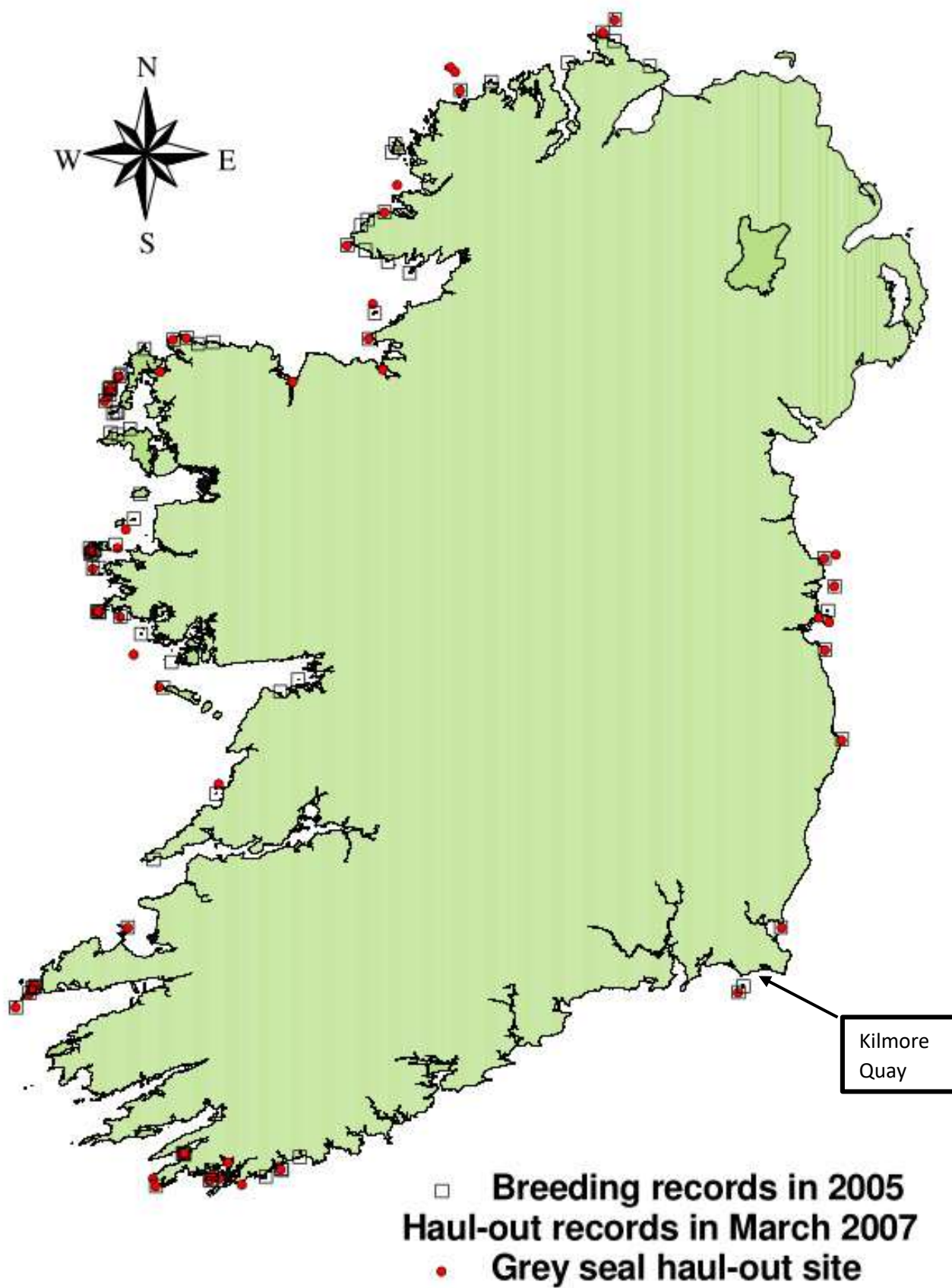


Figure 29. The distribution of grey seal haul-out sites in the Republic of Ireland in March 2007, relative to known breeding locations recorded in 2005. Haul-out locations are plotted as the centre points assigned to individual sites

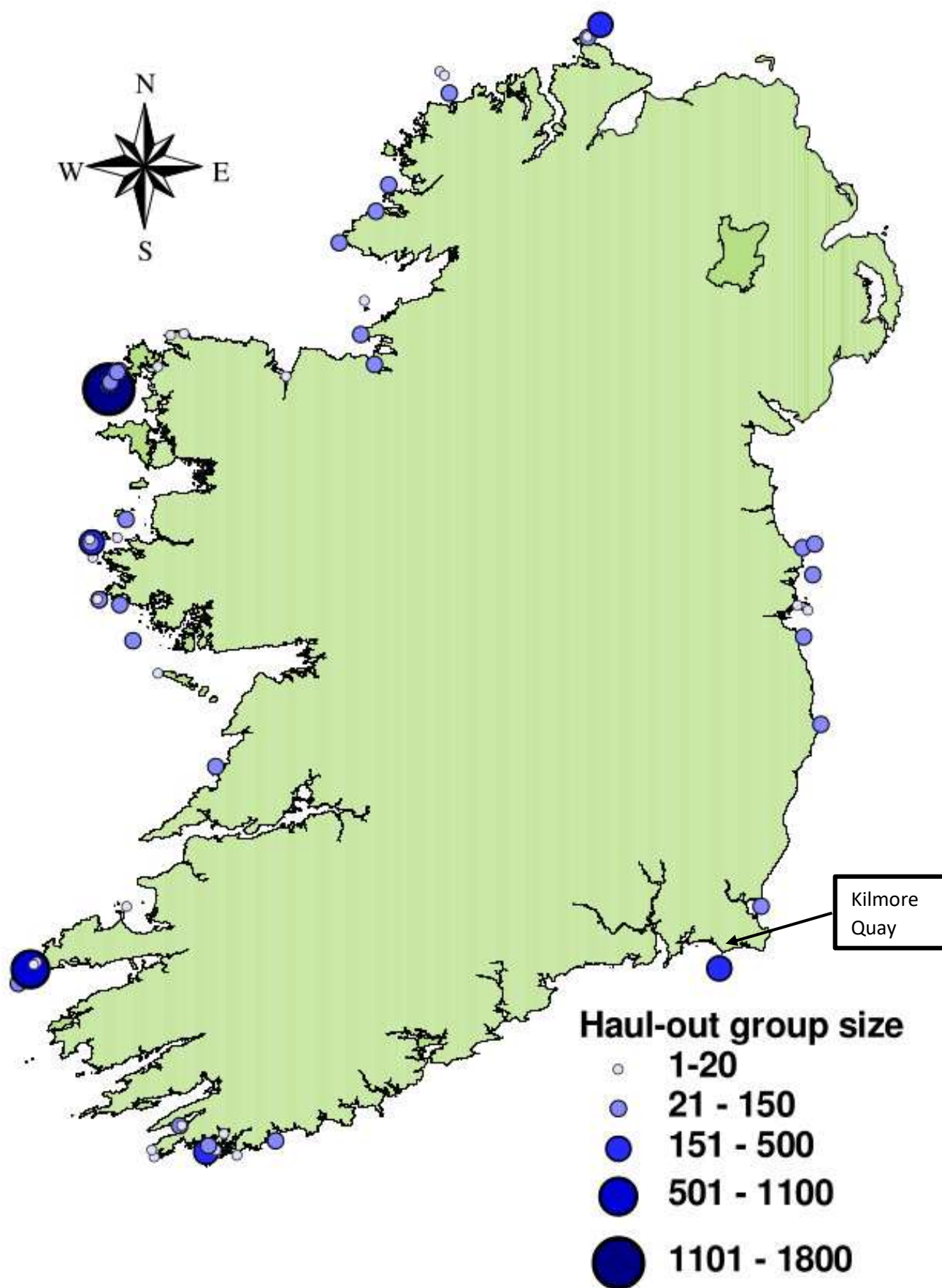


Figure 30. Grey seal regional distribution and group sizes derived from aerial imagery and data gathered in the Republic of Ireland in March 2007, during the annual moult season.

Discussion

The 2007 moult survey represents the first large-scale numerical assessment conducted in Irish or UK waters during the season and confirms the method's potential use as a long-term population monitoring tool. Heretofore efforts to estimate grey seal populations have traditionally focused on the breeding period (Ó Cadhla et al., 2007). In this context the survey established an important reference point in the investigation of grey seal stock distribution throughout the year, building on similar data collected during the summer of 2003 (Cronin et al., 2004).

The moult survey delivered a figure approaching the 2005 minimum population estimate of 5,509-7,083 (Ó Cadhla et al., 2007). It must be noted, however, that the survey programme was short-term in nature, with reconnaissance and aerial surveys spanning only 2-3 weeks of a protracted season (November-April; Kiely, 1998). Given that a turnover in animals doubtlessly occurs throughout the entire moult season, the total 5,343 grey seals counted between 1st-9th March must be considered a minimum subset of the available all-age population during the season. Based on data collected historically in Ireland (Kiely, 1998; Kiely et al., 2000) similar nationwide surveys conducted in the months of December, January and February would provide significant additional context to the current estimate and better address questions of population size, distribution and habitat use during the season as a whole.

The data obtained in 2007 confirmed, in a national context, several findings from previous research during the moult season in Ireland. Firstly the importance of islands in the Inishkea Group and Blasket Islands for moulting grey seals (Kiely, 1998) was reiterated in 2007 and given a national setting. Previous moult data gathered at the Inishkea Group recorded up to 2,200 grey seals among haul-out sites in the area with group sizes variable from day to day and month to month (Kiely, 1998). The 2007 data also reaffirmed the importance of specific moult sites within the Inishkea Group, most significantly 'the Dock' site, the use of which appears to be confined to the moult season only. The nearby island of Inishkeeragh also contains a specific moult site not utilised at other times of the year (Kiely, 1998). Such data highlight the need to consider a seasonal component in conservation and management planning to account for changes in terrestrial site use by the species.

The total of 989 grey seals recorded at the Blasket Islands in 2007, 947 of which were ashore on the Great Blasket Island, represents the highest number on record at these islands, more than twice that obtained in 1996-97 (Kiely, 1998) and considerably higher than that provided by anecdotal or unpublished sources (O. Ó Cadhla, CMRC, unpubl.). While it is difficult to interpret the result, given inconsistent and breeding-focused monitoring, it is noteworthy that the figure exceeds the 2005 all-age population estimate by c. 150 seals (see Ó Cadhla et al., 2007). Group sizes at several other locations (e.g. Low Island, Calf Islands, Carbery Island, the Inishkea Group) also exceeded population estimates based on breeding data (Ó Cadhla et al., 2007) suggesting a level of seasonal immigration first described at the Inishkea Group (Kiely, 1998).

In contrast, 2007 moult estimates for several other key breeding areas (e.g. Saltee Islands, northwest Galway, southwest Donegal) were well below 2005 breeding population figures, which is to be expected in a 'closed population' scenario where only a proportion of the animals associated with a given location are moulting simultaneously and a level of moult population turnover occurs during the season as a whole.

The 2007 survey thus indicated that changes in population distribution may occur seasonally in the Republic of Ireland, operating on a regional scale and conferring on certain sites an importance exceeding breeding population expectations. Data gathered in 2005 indicate that Ireland's breeding population may be increasing at key colonies (Ó Cadhla et al., 2007). Given that the species' moult phase occurs prior to the key annual foraging period, whether male or female (Bonner, 1990), it is important that moult-based research and monitoring continue, to facilitate a better understanding of Ireland's changing grey seal population and its role in the wider marine ecosystem.

Conclusions

Grey seal moult population size in the Republic of Ireland

The current grey seal moult population estimate for the Republic of Ireland is 5,343 seals of all ages. This is a minimum estimate and as such represents an appropriate national baseline figure during this phase of the annual cycle.

Areas of importance for moulting grey seals, regional and local

The moult population assessment underlined the importance on a national scale of nine key colonies located in Counties Donegal (north and southwest), Mayo (Inishkea Group), Galway (Inishgort & adjacent islands; Slyne Head islands), Kerry (Great Blasket Island), Cork (Western Calf Island), Wexford (Great Saltee Island) and Dublin (Lambay Island). Other moult haul-out sites of regional and local importance were identified. Most occurred along the Atlantic coastline from west Cork to Donegal.

Population changes at key colonies

Seasonal changes in population size at grey seal colonies are to be expected. The data gathered nationally during the moult season indicate that a number of locations may experience seasonal immigration during this phase of the annual cycle. It is not clear at this stage whether the represents a regional redistribution of national stock or the involvement of breeding stocks from outside the island of Ireland.'

As outlined in the "Summary of National Parks & Wildlife Service surveys for common (harbour) seals (*Phoca vitulina*) and grey seals (*Halichoerus grypus*), 1978 to 2003"¹⁴:

'Grey seals in Ireland are widespread but greatest concentrations are found on exposed south-western, western and northern coasts. Populations of grey seals are also found on the east and south coasts (Kiely et al., 2000). The largest populations of grey seal on the Irish Coast are found on the Blasket Islands, Inishkea Island group, the Saltees and the Raven (both off County Wexford). Between the tides they haul themselves out on to rocks, usually on uninhabited offshore islands, though some haul-outs are on secluded mainland beaches. Grey seals are gregarious at these haul-outs, sometimes forming large groups of several hundred animals, especially when they are moulting their fur in the spring.'

'Whilst NPWS surveys have concentrated on the Inishkeas and Blaskets, a number of other important populations are found on the Irish Coast (see Appendix I). However, it is notable that most sampling effort has been undertaken upon the west coast. A recent study on the Irish and Celtic Seas (Kiely et al. 2000) has shown that there are some relatively large populations that have remained to a large extent outside of NPWS sampling effort. The most important in order of grey seal abundance and all-age estimates calculated concurrently during surveys by Kiely et al. (2000) during 1997 and 1998 were:

*The Saltees (78.9 ± 9.2 (SE)) (Co. Wexford)
Raven Point (75.6 ± 7.2 (SE)) (Co. Wexford)
Lambay Island (53.0 ± 4.0 (SE)) (Co. Dublin)
Skerries Islands (28.2 ± 3.7 (SE)) (Co. Dublin)
Blackrock (24.5 ± 3.9 (SE)) (Co. Wexford)
Carnsore Point (12.2 ± 3.1 (SE)) (Co. Wexford)
Rockabill (9.7 ± 3.9 (SE)) (Co. Dublin)
Ireland's Eye (9.3 ± 2.7 (SE)) (Co. Dublin).'*

Further, there is an Appendix to this study that outlines the Moult Haul-Out Data for the Republic of Ireland, 2007. From this dataset, the estimated haul-out group size (Ng) for Great Saltee Island is 246, whilst there was a recorded Ng of 0 for Little Saltee Island.

The "Grey seal breeding population assessment in the Republic of Ireland, 2005"¹⁵ also identifies the Saltee Islands as a key breeding area for grey seals. A research project designed to carry out a comprehensive survey and deliver a reliable breeding population estimate for grey seals in Ireland, this study estimates a minimum pup count of 163 across both Great and Little Saltee Island, with a mean birth date of September 21st. An all-age population size was estimated to be between 571-734. These population estimates are visualised in the figure below.

¹⁴<https://www.npws.ie/sites/default/files/publications/pdf/IWM13.pdf>

¹⁵[https://www.npws.ie/sites/default/files/publications/pdf/OCadhla et al 2005 Grey Seal Population Survey.pdf](https://www.npws.ie/sites/default/files/publications/pdf/OCadhla%20et%20al%202005%20Grey%20Seal%20Population%20Survey.pdf)

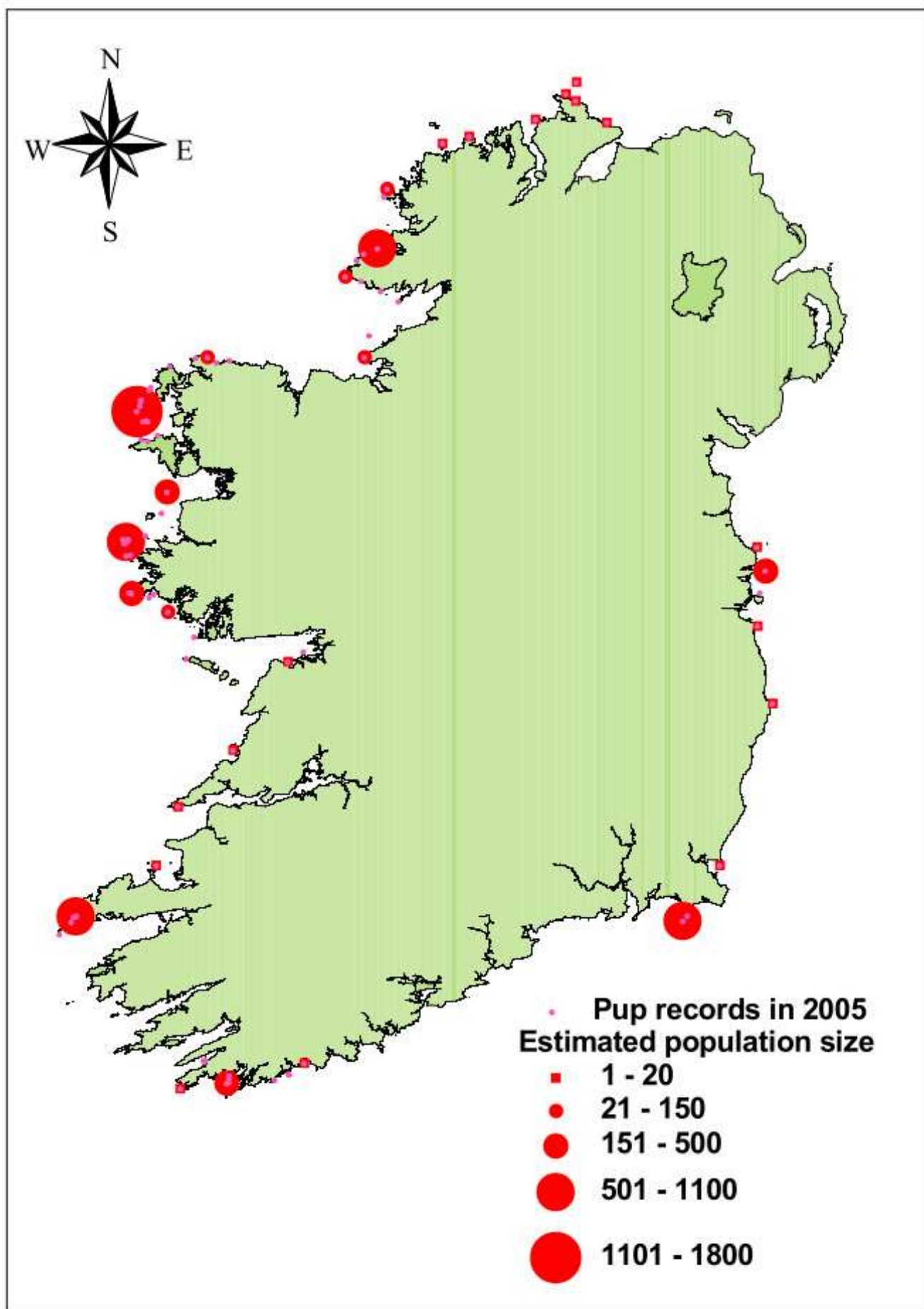


Figure 31. All-age grey seal population sizes and regional distribution derived from data gathered in the Republic of Ireland, August – December 2005. Data for low-production breeding colonies are pooled and included within nearby population estimates as appropriate

As demonstrated in the “Harbour seal population assessment in the Republic of Ireland” (August, 2003)¹⁶, there have been a number of recorded sightings of grey seals in the vicinity of Kilmore Quay (orange circle).



Figure 32. Map of the locations of groups of grey seals (*Halichoerus gyprus*) and harbour seals (*Phoca vitulina*) recorded on the Republic of Ireland and Carlingford Lough, Co. Down, August 2003.

¹⁶<https://www.npws.ie/sites/default/files/publications/pdf/IWM11.pdf>

As demonstrated in “An aerial survey of harbour seals in Ireland: Part 2- Galway Bay to Carlingford Lough” (August – September 2012)¹⁷, grey seals have been recorded in close proximity to Kilmore Quay. Surveys undertaken in August 2003 recorded 61 grey seals in the vicinity of Saltee Islands, whilst surveys in August-September 2012 recorded 95 grey seals in the vicinity of Saltee Islands. Recordings of grey seals in close proximity to Kilmore Quay are outlined below:

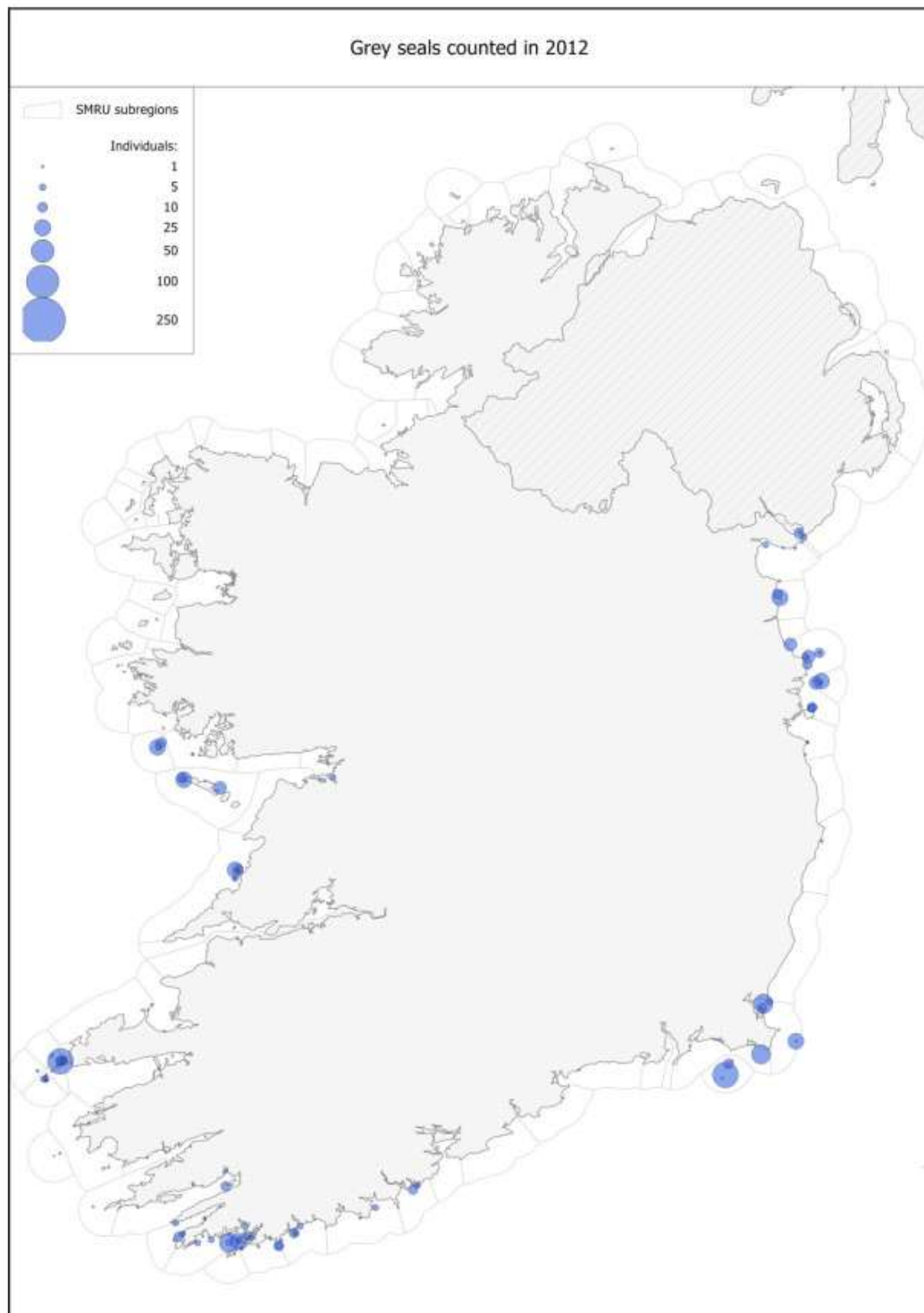


Figure 33. The number and distribution of grey seals counted in the west, south-west, south and east of Ireland in August-September 2012.

¹⁷<https://www.npws.ie/sites/default/files/publications/pdf/Harbour%20seal%202012%20Duck%20Morris.pdf>

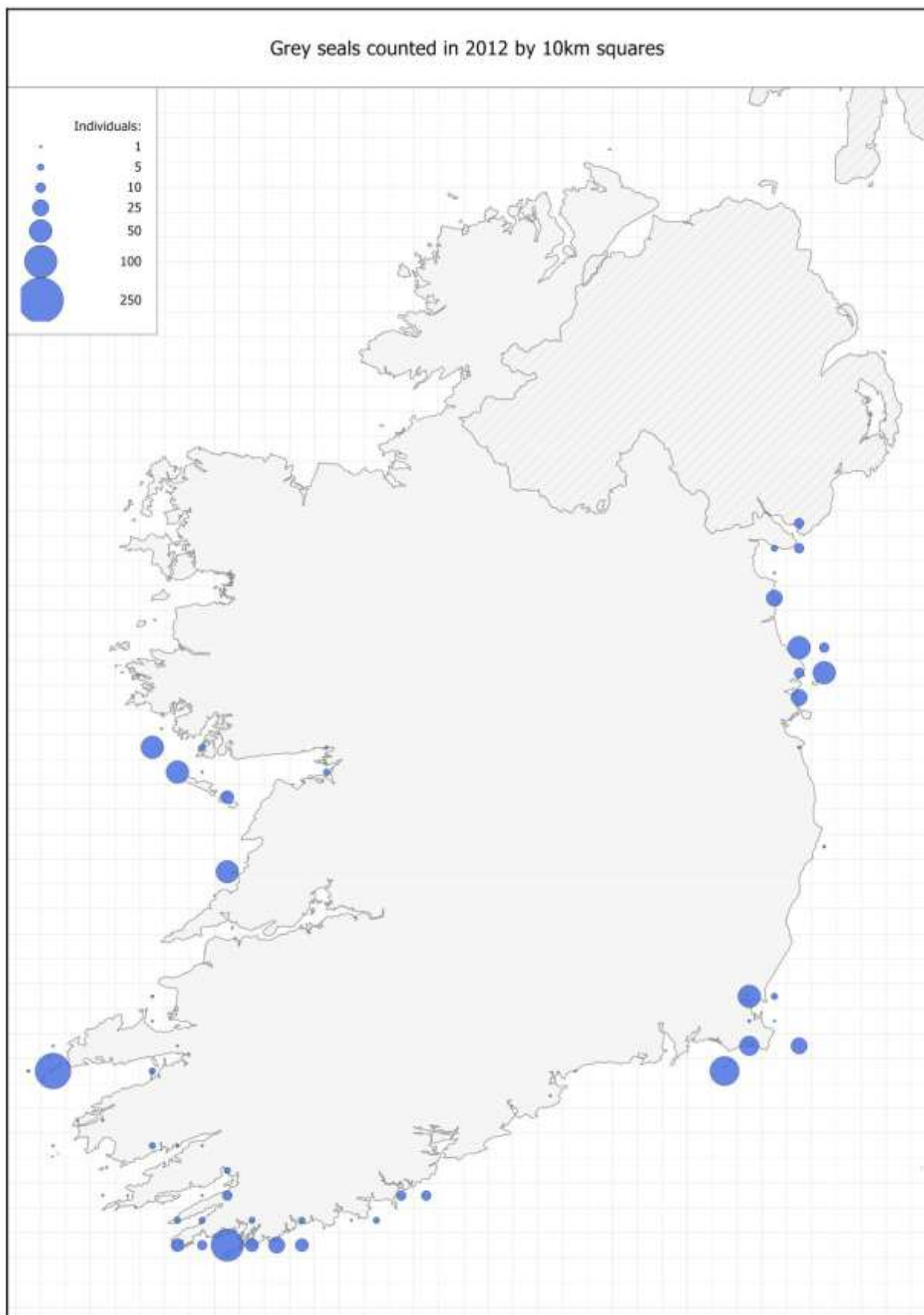


Figure 34. This map shows the same grey seal data in the west, south-west, south and east of Ireland as Figure 49 but counts are aggregated by 10km squares (background grid).

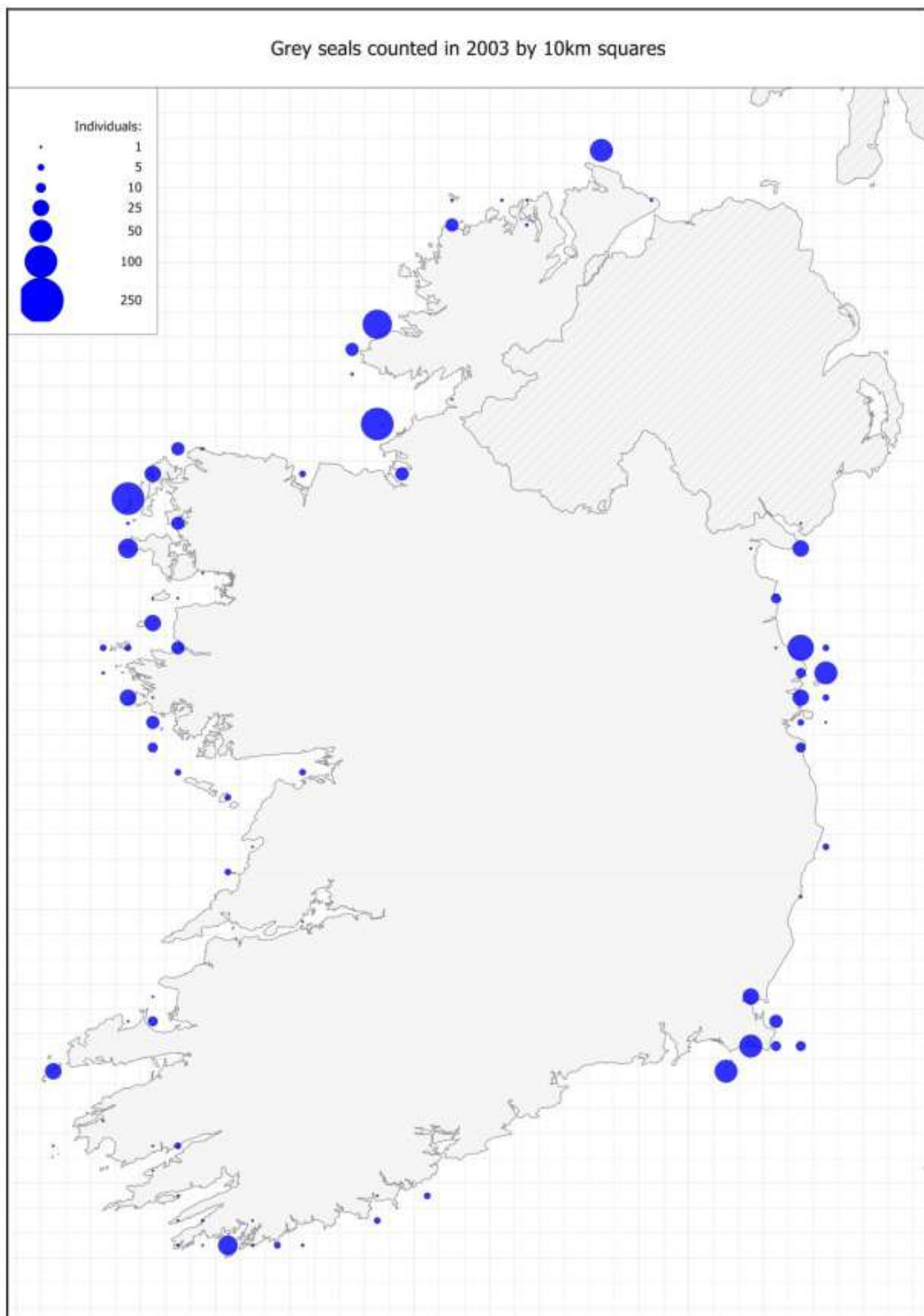


Figure 35. Grey seal distribution in Ireland in August 2003, with counts aggregated by 10km squares (background grid).

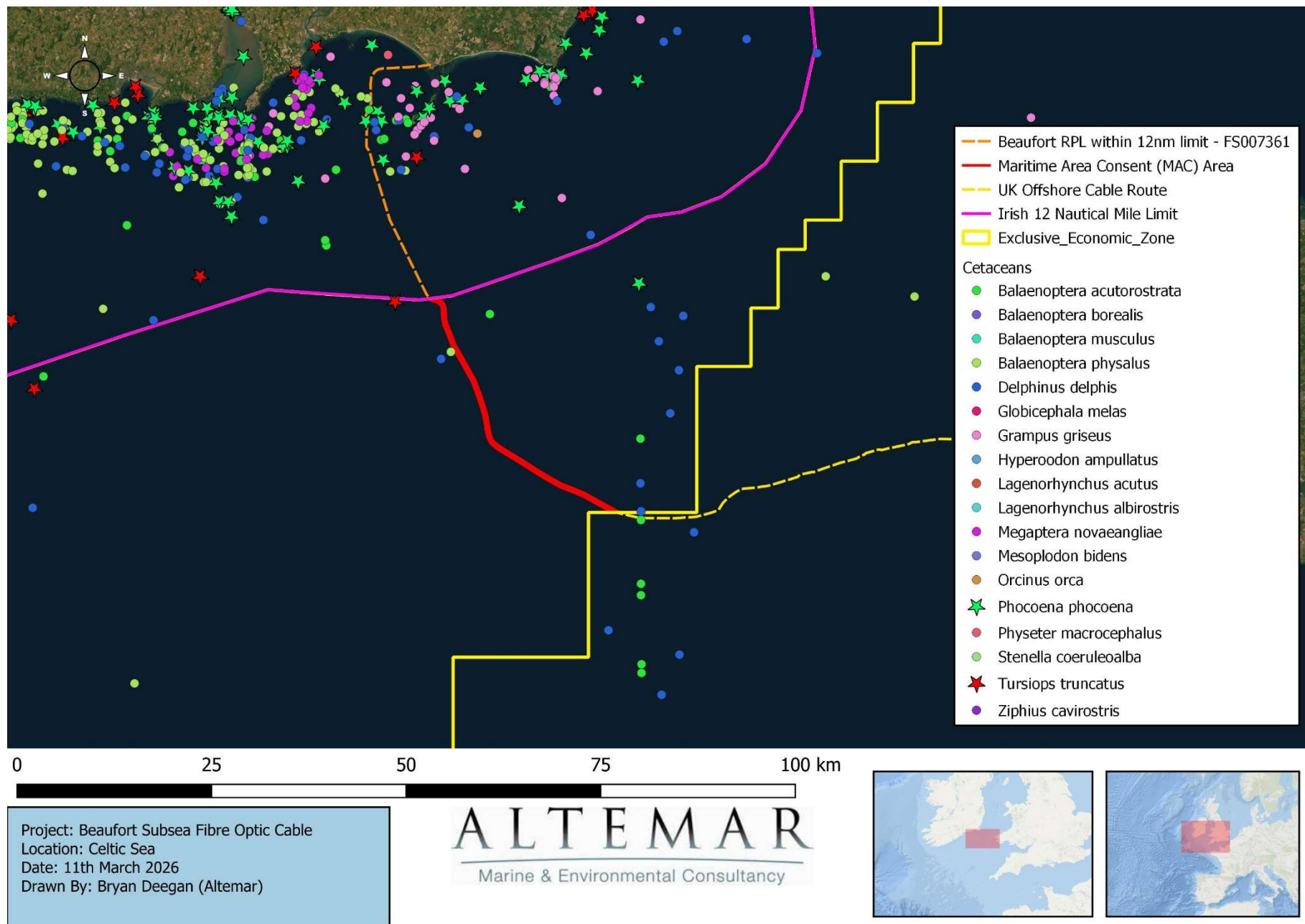


Figure 36. Recorded Cetacean species sightings (Source NBDC sightings data) proximate Beaufort Offshore Cable Route

Marine Mammals

All cetaceans are listed under Annex IV of the Habitats Directive, which means that they are protected wherever they occur. Bottle-nosed Dolphin and Harbour Porpoise are also listed under Annex II of the Directive. Annex II species require that core areas of their habitat are designated as sites of Community importance. Grey seals and Harbour seals are also listed under Annex II & Annex V of the Habitats Directive.

The proposed cable lay would be expected to impact on marine mammals primarily through the emission of noise due to the vessel and acoustics from the USBL (Ultra Short Baseline) equipment. It should be noted that, given the slow speed (0.5 knots) of the vessel, no collision impacts with the proposed works vessel and equipment are foreseen as a result of the proposed works. USBL is a method of underwater acoustic positioning. It is used to track subsea targets such as ROVs/plough. USBL positioning is used from shallow to deep waters (down to 10,000m and more) and its accuracy is proportional to the distance, typical from 1-2% of the slant distance for basic equipment and up to 0.06% for the ultimate USBL systems.

USBL positioning is suitable for a wide range of applications, including subsea asset tracking, subsea structure placement, LBL array calibration, UXO survey, IMR (Inspection, Maintenance and Repair). For metrology and sub-decimeteric deep water applications LBL solutions will be more suitable. As outlined by O'Brien (2005), "*sound travels 4.5 times faster in water than in air and low frequency sounds travel farther underwater than high frequency sounds.*"

Southall *et al.* (2019) outlined in their publication "*Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects*" revised the marine mammal hearing groups, which are seen in Table 31.

Table 31. Marine Mammal Functional Hearing Groups and Estimated Functional Hearing groups Proposed by Southall *et al.* (2019)

Marine mammal hearing group	Auditory weighting function	Genera (or species) included
Low-frequency cetaceans	LF	<i>Balaenidae</i> (<i>Balaena</i> , <i>Eubalaenidae</i> spp.); <i>Balaenopteridae</i> (<i>Balaenoptera physalus</i> , <i>B. musculus</i>)
		<i>Balaenopteridae</i> (<i>Balaenoptera acutorostrata</i> , <i>B. bonaerensis</i> , <i>B. borealis</i> , <i>1 B. edeni</i> , <i>B. omurai</i> ; <i>Megaptera novaeangliae</i>); <i>Neobalenidae</i> (<i>Caperea</i>); <i>Eschrichtiidae</i> (<i>Eschrichtius</i>)
High-frequency cetaceans	HF	<i>Physeteridae</i> (<i>Physeter</i>); <i>Ziphiidae</i> (<i>Berardius</i> spp., <i>Hyperoodon</i> spp., <i>Indopacetus</i> , <i>Mesoplodon</i> spp., <i>Tasmacetus</i> , <i>Ziphius</i>); <i>Delphinidae</i> (<i>Orcinus</i>)
		<i>Delphinidae</i> (<i>Delphinus</i> , <i>Feresa</i> , <i>Globicephala</i> spp., <i>Grampus</i> , <i>2 Lagenodelphis</i> , <i>Lagenorhynchus acutus</i> , <i>L. albirostris</i> , <i>L. obliquidens</i> , <i>L. obscurus</i> , <i>Lissodelphis</i> spp., <i>Orcaella</i> spp., <i>Peponocephala</i> , <i>Pseudorca</i> , <i>Sotalia</i> spp., <i>Sousa</i> spp., <i>Stenella</i> spp., <i>Steno</i> , <i>Tursiops</i> spp.); <i>Montodontidae</i> (<i>Delphinapterus</i> , <i>Monodon</i>); <i>Plantanistidae</i> (<i>Plantanista</i>)
Very high frequency cetaceans	VHF	<i>Delphinidae</i> (<i>Cephalorhynchus</i> spp.; <i>Lagenorhynchus cruciger</i> , <i>L. australis</i>); <i>Phocoenidae</i> (<i>Neophocaena</i> spp., <i>Phocoena</i> spp., <i>Phocoenoides</i>); <i>Iniidae</i> (<i>Inia</i>); <i>Kogiidae</i> (<i>Kogia</i>); <i>Lipotidae</i> (<i>Lipotes</i>); <i>Pontoporiidae</i> (<i>Pontoporia</i>)
Phocid carnivores in water	PCW	<i>Phocidae</i> (<i>Cystophora</i> , <i>Erignathus</i> , <i>Halichoerus</i> , <i>Histriophoca</i> , <i>Hydrurga</i> , <i>Leptonychotes</i> , <i>Lobodon</i> , <i>Mirounga</i> spp., <i>Monachus</i> , <i>Neomonachus</i> , <i>Ommatophoca</i> , <i>Pagophilus</i> , <i>Phoca</i> spp., <i>Pusa</i> spp.)

The Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (NOAA, 2018) outlined the hearing groups of marine mammals including the generalised hearing range of these cetacean groups (Table 32). They also noted that "*Exposures exceeding the specified respective criteria level for any exposure metric are interpreted as resulting in predicted temporary threshold shift (TTS) or permanent threshold shift (PTS) onset.*" The onset of PTS on marine mammals was also outlined in NOAA 2018 (Table 33). The updated figures for PTS and TTS for are outlined in Table 34.

Table 32. Hearing Groups of Marine Mammals (NOAA, 2018)

Hearing Group	Generalized Hearing Range*
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz
High-frequency (HF) cetaceans (true porpoises, Kogia, river dolphins, cephalorhynchid, Lagenorhynchus cruciger & L. australis)	275 Hz to 160 kHz
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz

* Represents the generalized hearing range for the entire group as a composite (i.e., all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall et al. 2007) and PW pinniped (approximation).

Table 33. Onset of PTS in Marine mammals

	PTS Onset Thresholds (Received Level)	
Hearing Group	Impulsive ¹	Non-impulsive ²
Low-Frequency (LF) Cetaceans	Cell 1 <i>Lpk,flat</i> : 219 dB <i>LE,LF,24h</i> : 183 dB	Cell 2 <i>LE,LF,24h</i> : 199 dB
Mid-Frequency (MF) Cetaceans	Cell 3 <i>Lpk,flat</i> : 230 dB <i>LE,MF,24h</i> : 185 dB	Cell 4 <i>LE,MF,24h</i> : 198 dB
High-Frequency (HF) Cetaceans	Cell 5 <i>Lpk,flat</i> : 202 dB <i>LE,HF,24h</i> : 155 dB	Cell 6 <i>LE,HF,24h</i> : 173 dB
Phocid Pinnipeds (PW) (Underwater)	Cell 7 <i>Lpk,flat</i> : 218 dB <i>LE,PW,24h</i> : 185 dB	Cell 8 <i>LE,PW,24h</i> : 201 dB
Otariid Pinnipeds (OW) (Underwater)	Cell 9 <i>Lpk,flat</i> : 232 dB <i>LE,OW,24h</i> : 203 dB	Cell 10 <i>LE,OW,24h</i> : 219 dB

¹Impulsive: produce sounds that are typically transient, brief (less than 1 second), broadband, and consist of high peak sound pressure with rapid rise time and rapid decay (ANSI 1986; NIOSH 1998; ANSI 2005).

²Non-impulsive: produce sounds that can be broadband, narrowband or tonal, brief or prolonged, continuous or intermittent) and typically do not have a high peak sound pressure with rapid rise/decay time that impulsive sounds do (ANSI 1995; NIOSH 1998).

Table 34. Southall *et al.* (2019) TTS- and PTS-onset thresholds for marine mammals exposed to impulsive noise: SEL thresholds in dB re 1 $\mu\text{Pa}^2\text{s}$ under water and dB re (20 μPa)²s; and peak SPL thresholds in dB re 1 μPa under water.

Hearing Group	Impulsive Noise		Non-impulsive Noise
	Unweighted SPL _{peak} (dB re 1 μPa)	Weighted SEL _{cum} (dB re 1 $\mu\text{Pa}^2\text{s}$)	Weighted SEL _{cum} (dB re 1 $\mu\text{Pa}^2\text{s}$)
PTS Criteria			
Low-frequency (LF) cetaceans	219	183	199
High-frequency (HF) cetaceans	230	185	198
Very-High frequency cetaceans (VHF)	202	155	173
Phocid carnivores in water (PCW)	218	185	201
TTS Criteria			
Low-frequency cetaceans	213	168	179
High-frequency cetaceans	224	170	178
Very high-frequency cetaceans	196	140	153
Phocid carnivores in water	212	170	181

The hearing ranges and sensitivity of marine mammals differ from one species to another depending on their audiogram. “For example, harbour porpoises are sensitive from 3 kHz to 130 kHz, with peak sensitivity at 125-130 kHz, and bottlenose dolphins from 5-110 kHz, with peak sensitivity at 40 and 60-116 kHz” (Southall et al., 2007). Common seals are sensitive 4-45 kHz (peak sensitivity at 32 kHz) and grey seals 8-40 kHz. Humans are sensitive only to frequencies from 20 Hz to 16-18 kHz but with peak sensitivity from 2-4 kHz. Most small cetaceans, excluding harbour porpoise, have an auditory bandwidth of 150 Hz to – 160 kHz, while harbour porpoise have an auditory bandwidth within 200 Hz to 180 kHz. Pinnipeds in water are thought to have an auditory bandwidth of between of 75 Hz to 75 kHz and from 75 Hz to 30 kHz in air (Southall et al. 2007).”

The proposed USBL equipment and the noise frequency emissions are seen in Table 35.

Table 35. Details of the potential sources of acoustic noise

Equipment Type	Typical Source Pressure Level (dB re 1 µPa @ 1 m)	Potential for auditory injury?	Typical Frequency Range (kHz)
USBL System	194 - 207	Potential risk	20-50
Large Vessel (>100m)	Approx. 180	Potential risk	50-300 (DECC, 2011)

The low frequencies emitted from the USBL equipment (20-50 kHz) are below the auditory range of high and very high frequency cetaceans, but are within the hearing range of low frequency cetaceans that would be seen on the cable route. Conversely, frequencies emitted by the cable-laying vessel are outside the auditory range of low frequency cetaceans, but within the auditory range of high and very high frequency cetaceans. It should be noted that, due to the slow speed of the vessel during cable burial (0.5 knots), acoustic noise emitted from the main lay vessel is expected to be low.

The noise emitted from a USBL is below the TTS- and PTS-onset threshold injury levels indicated by Southall et al. (2019), negative impacts may be foreseen if Low Frequency Cetaceans are close enough to the equipment to receive sound levels above this indicative threshold.

The operations would 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 proposed works. Marine mammals in the vicinity of the vessel during start up procedures would be given ample time to leave the site with the due to the slow launch/recovery procedures of the subsea plough outlined in the guidelines. In addition, vessel speeds are extremely slow which would give marine mammals ample opportunity to move from the area.

The Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing

Southall (2019) outlined the main differences between their publication and previous publications including NOAA (2018) which was referenced as NMFS (2018) in Southall (2019). Southall (2019) states that “The noise criteria here represent the next step in a sequential process of evolution of the criteria proposed by Southall et al. (2007), substantially modified with new analytical methods by Finneran (2016), and recently adopted as U.S. regulatory guidance by the NMFS (2016, 2018). While the quantitative process described herein and the resulting exposure criteria here are based on, and in many respects are identical to, those derived by Finneran (2016) and adopted by the NMFS (2016, 2018), there are a number of significant distinctions. The exposure criteria here appear in a peer-reviewed publication and include all marine mammal species for all noise exposures, both under water and in air for amphibious species. NMFS (2016, 2018) provides regulatory guidance only for the subset of marine mammals under their jurisdiction and do not include criteria for aerial noise exposures, an important consideration in many locations for which some earlier assessments were made (Finneran & Jenkins, 2012). The exposure criteria here, while based on the Finneran (2016) quantitative method and consistent with the NMFS (2016, 2018) guidance where they overlap, are thus more broadly relevant, peer-reviewed, and less subject to potential changes in national regulatory policy.”

Southall (2019) also stated that “It should be noted that this results in some proposed differences in the terminology of hearing groups relative to those used in Finneran (2016) and NMFS (2016, 2018). These proposed differences in nomenclature may be confusing, but we believe they are justified (see the “Marine Mammal Hearing Groups and Estimated Group Audiograms” section and Appendices 1-6) and will support future criteria as new information emerges.”

The difference in nomenclature between NOAA 2018 and Southall (2019) is that NOAA (2018)¹⁸ classified cetaceans as Low-frequency (LF) cetaceans (baleen whales), Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales) and High-frequency (HF) cetaceans (true porpoises, Kogia, river dolphins, cephalorhynchid, Lagenorhynchus cruciger & L. australis) while Southall reclassified these groups to Low-frequency cetaceans, High-frequency cetaceans, Very high-frequency cetaceans. As outlined in Southall (2019) *“The distinction between HF and VHF cetacean groups (as opposed to mid- and high-frequency) reflects the regions of best hearing sensitivities within these groups, often including frequencies approaching or exceeding 100 kHz; these frequencies would be more appropriately described within marine bioacoustics as high to very high. Further, as discussed in more detail below, a number of anatomical and sound production properties suggest a potential distinction of very low-(VLF) and LF cetaceans among mysticetes. Some evidence also suggests a potential segregation of mid-frequency (MF) and HF cetaceans in addition to the distinction of HF and VHF cetaceans.”* This is in effect a relabelling of Mid-Frequency (MF) Cetaceans and High-Frequency (HF) Cetaceans to High-frequency cetaceans and Very high-frequency cetaceans respectively. It should be clearly noted that the PTS values within the updated groups were identical between NOAA, 2018 and Southall 2019 and it was in effect a renaming of the groups.

Lurton (2016) modelled the sound field radiated by multibeam echosounders for acoustical impact assessment. Lurton (2016) stated that *“considering the injury criteria, the results illustrate that injury hazards are possible only at very short distances from the source: e.g. about 5 m for maximum Sound Pressure Level and 12 m for cumulative Sound Exposure Level in the case of a 240-dB source level, considering cetaceans. For behavioural response criteria, the corresponding values are 9 m and 70 m.”*

Based on these data, it is concluded that an underwater source noise level of 207dB (which the proposed main lay will not exceed) does not result in injury hazards once a minimum separation distance of 12 metres is maintained between the source of the noise and a cetacean. Equally there is no behavioural response once a minimum separation distance of 70 metres is maintained between the source of the noise and a cetacean. The proposed survey guidelines (DAHG, 2014) require a 1000m distance between the vessel and cetaceans prior to the commencement of vessel operations.

The operations would comply with the NPWS (2014) *“Guidance to manage the risk to marine mammals from man-made sound sources in Irish waters”* http://www.npws.ie/sites/default/files/general/Underwater_sound_guidance_Jan_2014.pdf. These guidelines would be deemed adequate to mitigate the negative impacts of the proposed 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. It should be noted that the vessel will be operating at a very slow speed on a 24 hour basis with a MMO on board. It is considered that due to the fact that the ship will be operating on this basis, a MMO will be onboard operating to MMO guidance procedures, it will be providing significant time for cetaceans to leave the area. In addition, vessel speeds are extremely slow which would give marine mammals ample opportunity to move from the area.

¹⁸ NOAA 2018 Revision to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts. NOAA Technical Memorandum NMFS-OPR-59 April 2018.

Note: in relation to consistency between Southall (2019) and NOAA (2018)

The Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (NOAA, 2018) (or National Marine Fisheries Service, 2018 (as quoted in Southall 2019)), outlines the hearing groups of marine mammals including the generalised hearing range of these cetacean groups (Annex II). NOAA (2018) also noted that *“Exposures exceeding the specified respective criteria level for any exposure metric are interpreted as resulting in predicted temporary threshold shift (TTS) or permanent threshold shift (PTS) onset.”* The thresholds for the onset of PTS on marine mammals were also outlined in NOAA 2018. The updated Southall (2019) figures for PTS and TTS for are outlined in Annex IV.

Southall (2019) outlined the main differences between their publication and previous publications including NOAA (2018) which was referenced as NMFS (2018) in Southall (2019). Southall (2019) states that *“The noise criteria here represent the next step in a sequential process of evolution of the criteria proposed by Southall et al. (2007), substantially modified with new analytical methods by Finneran (2016), and recently adopted as U.S. regulatory guidance by the NMFS (2016, 2018). While the quantitative process described herein and the resulting exposure criteria here are based on, and in many respects are identical to, those derived by Finneran (2016) and adopted by the NMFS (2016, 2018), there are a number of significant distinctions. The exposure criteria here appear in a peer-reviewed publication and include all marine mammal species for all noise exposures, both under water and in air for amphibious species. NMFS (2016, 2018) provides regulatory guidance only for the subset of marine mammals under their jurisdiction and do not include criteria for aerial noise exposures, an important consideration in many locations for which some earlier assessments were made (Finneran & Jenkins, 2012). The exposure criteria here, while based on the Finneran (2016) quantitative method and consistent with the NMFS (2016, 2018) guidance where they overlap, are thus more broadly relevant, peer-reviewed, and less subject to potential changes in national regulatory policy.”*

Southall (2019) also stated that *“It should be noted that this results in some proposed differences in the terminology of hearing groups relative to those used in Finneran (2016) and NMFS (2016, 2018). These proposed differences in nomenclature may be confusing, but we believe they are justified (see the “Marine Mammal Hearing Groups and Estimated Group Audiograms” section and Appendices 1-6) and will support future criteria as new information emerges.”*

The difference in nomenclature between NOAA 2018 and Southall (2019) is that NOAA (2018) classified cetaceans as Low-frequency (LF) cetaceans (baleen whales), Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales) and High-frequency (HF) cetaceans (true porpoises, Kogia, river dolphins, cephalorhynchid, Lagenorhynchus cruciger & L. australis) while Southall reclassified these groups to Low-frequency cetaceans, High-frequency cetaceans, Very high-frequency cetaceans. As outlined in Southall (2019) *“The distinction between HF and VHF cetacean groups (as opposed to mid- and high-frequency) reflects the regions of best hearing sensitivities within these groups, often including frequencies approaching or exceeding 100 kHz; these frequencies would be more appropriately described within marine bioacoustics as high to very high. Further, as discussed in more detail below, a number of anatomical and sound production properties suggest a potential distinction of very low-(VLF) and LF cetaceans among mysticetes. Some evidence also suggests a potential segregation of mid-frequency (MF) and HF cetaceans in addition to the distinction of HF and VHF cetaceans.”* This is in effect a relabelling of Mid-Frequency (MF) Cetaceans and High-Frequency (HF) Cetaceans to High-frequency cetaceans and Very high-frequency cetaceans respectively. It should be clearly noted that the PTS values within the updated groups were identical between NOAA, 2018 and Southall 2019 and it was in effect a renaming of the groups.

7. In-Combination Effects

As outlined by (OSPAR, 2012) “Cumulative effects, the combined effect of more than one activity, may reinforce the impacts of a single activity due to temporal and/or spatial overlaps”. The potential for in-combination effects within the ZOI that may occur as a result of the proposed project, during and post works has been assessed. The following cumulative impact assessment has been guided by the EC 2021 AA guidance document¹⁹, with particular reference to “Table 2. Cumulative impact assessment”.

7.1 Geographic Boundaries and the Timeline for Assessment

It should be noted that no terrestrial works are proposed on the Irish mainland as part of this application, which exclusively relates to the Beaufort Offshore Cable Route located between the 12 nautical mile limit and the Irish EEZ. The proposed cable installation works within the Irish EEZ associated with the proposed project are located exclusively in the offshore subtidal, approx. 29km from the Irish shoreline at its nearest point. The potential ZOI for in-combination effects for this assessment has been deemed to be projects located proximate to the proposed Beaufort Offshore Cable Route within the Irish EEZ, in addition to subtidal elements relating to underwater noise. The geographic boundaries of assessment were expanded to include coastal and offshore marine projects located proximate to the Beaufort Offshore Cable Route within the Irish EEZ.

MARA licencing in Ireland relates to licence applications out to the Irish EEZ limit. In order to assess the potential trans-boundary effects details of designated sites within UK waters were investigated. The cable routes within UK waters are subject to this UK permitting process and the potential impacts on designated sites are subject to a separate application process assessed by UK authorities. For the UK element of the proposed cable lay to proceed, it has to be approved by UK authorities and the reporting conclude that, following the implementation of appropriate mitigation, the proposed project would not adversely affect the integrity of UK designated sites, alone or in combination with other projects.

In relation to the timeline for assessment, given the short temporal nature of the proposed works, and the fact that the proposed works will be isolated to the cable route extents with potential for noise to extend beyond the cable route, the most recent projects located within the vicinity of the proposed works area have been examined for potential in-combination effects.

7.2 Identification of Plans/Projects that could act In Combination

Foreshore Applications, Maritime Area Consent (MAC) Applications, Maritime Usage Licence (MUL) Applications, EIA portal, and An Coimisiún Pleanála (ACP) Applications were examined for projects in proximity to the proposed Beaufort Offshore Cable route. Projects within the potential ZOI of the proposed Beaufort Offshore Cable Route are outlined in Tables 36-38. No projects of significance located within the ZOI of the proposed development were identified within the EIA portal / ACP Application search.

Table 36. Foreshore licence applications in vicinity of Beaufort Offshore Cable Route

Reference	Title	Year	Location	Activity	Status
FS007445	Blackwater Offshore Wind – Marine Surveys	2022	Wexford	Marine Surveys	Applied
FS007436	Voyage Offshore Array Limited Site Investigations for proposed Wind Farm	2022	Waterford and Wexford	Site Investigations	Applied
FS007509	Rosslare Europort Offshore Wind Hub Site Investigations	2022	Wexford	Site Investigations	Determination
FS007361	Beaufort Subsea Fibre Optic Cable	2022	Off Wexford Coast	Installation of Subsea Fibre Optic Cable	Determination
FS007318	RWE Renewables Ireland East Celtic Ltd. Site Investigations for proposed East Celtic Offshore Wind Park	2022	Wexford and Waterford	Site Investigations	Applied

¹⁹ [Official Journal C 437/2021 \(europa.eu\)](https://eur-lex.europa.eu/eli/dir/2021/437/oj)

Reference	Title	Year	Location	Activity	Status
FS007224	Rosslare Europort Berth 3 Extension	2022	Wexford	Extension of Existing Berth 3	Determination
FS007219	Rosslare Europort Maintenance Dredging	2022	Wexford	Maintenance Dredging	Determination
FS007038	Lady's Island Pipeline	2022	Wexford	Installation of 2 no. pipes and a flow control structure	Determination
FS007351	GDG Ltd. Deployment of 3 ADCP off the coast of Wicklow and Deployment of 1 ADCP off the coast of Wexford	2021	Wexford & Wicklow	Four Acoustic Doppler Current Profiler (ADCP) Trawl Resistant Bottom Mount (TRBM) units to be deployed on the seabed in the Irish Sea for a duration of 35 days to collect data on current speed and direction at each location.	Determination
FS007222	Rosslare Europort Site Investigation	2021	Wexford	Site Investigation	Determination
FS007050	Greenlink Interconnector Wexford	2019	Wexford	Subsea and underground electricity interconnector cable	Determination
FS006982	Energia - Application for Site Investigation Licence for Windfarm off Helvick Head	2019	Waterford	Site investigations for Offshore Wind Farm	Determination
FS007038	Lady's Island Pipeline	2021	Wexford	Installation of 2 no. pipes and a flow control structure	Determination

Table 37. Maritime Area Consent (MAC) applications proximate to the proposed Beaufort Offshore Cable Route within the Irish EEZ (Accessed 15/03/2026)

Reference	Year	Location	Activity	Status
MAC240057	2025	Tonn Nua, off the coast of Co. Waterford	The development of a 900 megawatt (MW) offshore windfarm	Applied
MAC20240006	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
MAC20230005	2024	Rosslare Europort, Co. Wexford.	Port Facilities to support the ORE Sector	Determined
MAC240016	2025	Duncannon, Co. Wexford and Crooke, Co. Waterford	Laying of a Fibre Optic Cable and auxiliary works	Applied
MAC250029	2025	Bray Head to Greystones North Beach, Co. Wicklow	Coastal Protection Works	Determined
MAC250031	2025	Newcastle to Wicklow Murrough, Co. Wicklow	Coastal Protection Works	Determined
MAC250030	2025	Kilcoole to Newcastle, Co. Wicklow	Coastal Protection Works	Determined
2022-MAC-006	2024	Off Wicklow Coast	Offshore Windfarm	Determined
2022-MAC-002	2022	Off Wicklow Coast	Offshore Windfarm	Determined

Table 38. Maritime Usage Licence (MUL) applications proximate to the proposed Beaufort Offshore Cable Route within the Irish EEZ (Accessed 15/03/2026)

Reference	Year	Location	Activity	Status
LIC230033	2023	Irish EEZ	Proposed installation and operation of the 2Africa Submarine Cable System within the Irish Exclusive Economic Zone (EEZ). The planned cable will extend from Widemouth Bay in Cornwall to a number of countries in Europe, Africa, and the Middle East.	Determined
MUL240036	2024	South Coast of Ireland	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 zones, and seven landfall zones.	Determination
LIC240006	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
MUL250019	2025	South Waterford - Maritime Area A – Tonn Nua	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	Consultation Open
MUL240026	2024	South East Coast	To conduct a strategic modelling study of water currents and bathymetry along the Southeast Coast of Ireland	Minded To
MUL230026	2024	Wicklow Port, Co. Wicklow	Maintenance dredging of the navigation channel, turning basin and berths within Wicklow Port.	Applied

In addition to the above projects, the following plans and policies were reviewed and considered for possible in-combination effects with the Proposed Development:

- The South Coast Designated Maritime Area Plan for Offshore Renewable Energy (SC-DMAP)
- Project Ireland 2040: National Marine Planning Framework
- Project Ireland 2040: National Planning Framework

7.3 Impact Identification

The potential impacts of the proposed cable laying are Temporary (i.e. Effects lasting less than a year) and primarily to occur during the brief construction period (with the presence of boats, machinery and personnel in the vicinity of the works) as sediments redistribute over the cable. Impacts on infauna would be deemed to be temporary (i.e. Effects lasting less than a year). Maintenance works associated with the proposed project are Temporary in nature (i.e. Effects lasting less than a year) and will be isolated to specific areas along the cable route. In the event that the offshore cable is decommissioned, decommissioning works would be Temporary in nature (i.e. Effects lasting less than a year) and produce minor sediment dispersal that would diffuse and dilute within the expansive marine environment.

The proposed Beaufort Offshore Cable Route will cross the UK-IRL Crossing 1 and Hibernia Atlantic telecoms cables. The proposed Beaufort cable laying methodology has been designed to protect existing cables and thereby minimise any potential environmental impacts that may arise from the proposed works (see Section 4.2 for full details). In particular, the use of a CAPJET will ensure that the crossed cable will not be damaged and enable the burial of the Beaufort offshore cable at these crossings. The Beaufort Offshore Cable Route will also cross the Greenlink HVDC Interconnector cable, permitted and laid under **FS007050**. Similarly, the proposed Beaufort cable laying methodology has been designed to protect the Greenlink HVDC Interconnector cable through the pre-lay installation of articulated concrete mattresses at the crossing point (on which the Beaufort Cable will be laid) and construction of a rock berm over the Beaufort cable at this crossing point (see Section 4.2.1 for further details). As a result, the proposed Beaufort cable laying methodology has been designed to prevent any potential in-combination effects with existing subtidal cables within the Irish EEZ.

It is noted that there is potential for proposed plans and projects within the offshore subtidal waters between 12nm limit and Irish EEZ Boundary to have cumulative, negative impacts on marine mammals and seabirds via disturbance impacts. However, the core strategy, policies and objectives of the above SC-DMAP and Planning Frameworks have been developed to anticipate and avoid the need for developments that would be likely to significantly affect the integrity of any European site. Furthermore, such developments are required to conform to the relevant regulatory provisions and implement mitigation for the prevention of pollution, nuisance or other environmental effects likely to significantly affect the integrity of European sites. In addition, sustainable development is inherent in the objectives of all development plans within Irish waters in addition to compliance within the Habitats and Birds Directives.

7.4 Pathway Identification

In the marine offshore subtidal of the Irish EEZ, there is a potential pathway for disturbance impacts to bird species protected as SCIs of Seas Off Wexford SPA and underwater noise to impact on marine mammals (protected as qualifying interests of proximate designated sites) through the use of main-lay equipment. As a result, given the nature and location of the proposed works, and out of an abundance of caution, it is considered that there is the potential for in-combination effects with the approved Beaufort Subsea Fibre Optic Cable project (**FS007361**), which entails the installation of Subsea Fibre Optic Cable from Kilmore Quay to the Irish 12 nautical mile limit, via noise and visual disturbance to marine mammals and protected seabirds.

There are no other projects, identified within the Foreshore Licence applications, EIA portal, ACP or MARA planning records, that have been granted planning or currently under construction, proximate to the proposed Beaufort Offshore Cable Route within the Irish EEZ, that could potentially cause significant in combination effects on European sites via the identified pathways.

7.5 Prediction

The proposed works would not be seen to have a significant impact on water quality of the area, including impacting the water quality status. A Natura Impact Statement was prepared by Altamar Ltd. to accompany the **FS007361** licence application. This report outlines mitigation measures to prevent significant disturbance impacts on marine mammals and seabirds. This report concludes with the following: *'On the basis of the content of this report, the competent authority is enabled to conduct an Appropriate Assessment and consider whether, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites conservation objectives, will adversely affect the integrity of the European site. **The proposed project will not adversely affect the integrity of the European site.**'* Out of an abundance of caution, given the proximity of the proposed Beaufort Offshore Cable Route to the approved **FS007361**

project, mitigation measures specific to marine mammals and protected seabirds are required to prevent in-combination effects.

Additionally, out of an abundance of caution, it is considered that there is the potential for in-combination effects with the UK element of the Beaufort subsea cable. Mitigation measures specific to marine mammals and protected seabirds are required to prevent in-combination effects.

Given the scale and the temporal nature of the proposed works, no significant in-combination effects with other identified plans or projects are foreseen. Any potential impacts from a pathway that the proposed project may share with other projects identified in Tables 7-9 are considered to be minimal, and no significant in-combination effects on designated conservation sites are foreseen.

7.6 Assessment

Out of an abundance of caution, it is considered that, in the absence of mitigation measures, there is the potential for in-combination effects with the approved FS007361 project and UK element of the Beaufort subsea cable. All other projects outlined above are either completed or, are currently going through planning stages and are not expected to be carried out concurrently or are not at a scale or location where in combination effects are foreseen with the proposed project. This report pertains to the cable laying for a marine fibre optic cable in subtidal habitats. As can be seen from using the Best Available Techniques and mitigation measures during cable laying considerable effort has gone into minimising the potential environmental impact of the project. *“Generally all mitigation measures applied for individual cables also contribute to reduction of cumulative impacts”* (OSPAR, 2012). There is the potential for in-combination effects with FS007361 and UK element of the Beaufort subsea cable on protected marine mammals and seabirds if these projects are carried out concurrently.

8. Mitigation Measures & Monitoring

Minor short-term impacts may result as a consequence of the project, but these are believed not to be at the scale to impact on the integrity of the Natura 2000 sites, species or the Site Specific Conservation Objectives. However, following the precautionary principle, substantial mitigation measures have been developed to minimise the ecological impacts of the project.

Mitigation measures are proposed, including having an MMO present on the cable laying vessel to ensure marine mammals are not disturbed by the proposed works. The cable route would see invertebrate mortalities in the vicinity of the subtidal plough burial areas. However, these effects would be limited in nature, short term, and would not impact on the conservation objectives of any Natura 2000 site.

Pre cable laying mitigation

Route Planning

A strict route selection process was carried out to assess the optimal route from the 12nm limit to the Irish EEZ, taking into account the lowest environmental impact and highest resource efficiency on the basis of sound and comparable data. This included addressing engineering issues as well as environmental concerns which included assessing existing infrastructure.

Construction phase mitigation measures

Mitigation impacts are primarily concerned with the cable laying as minimal impacts are foreseen during the operation phase, with the exception of human intervention in relation to a break or fault in the cable. Impacts in a decommissioning stage are similar to those of the cable laying phase. Repairing the cable may involve several scenarios, such as the use of a grapnel to lift the cable on board so that repairs can be carried out at sea. As a result, the following mitigation measures will be implemented:

- 1 During all cable operations within Irish waters, the cable lay vessel will be operating at idle /minimal wake speeds which reduces potential collision risk with marine mammals. ROV trenching operations will typically not exceed 0.5kn.
- 2 A certified Marine Mammal Observer (MMO) will be onboard the vessel at all times in Irish waters to implement standard NPWS marine mammal mitigation measures. “Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters” (NPWS, 2014) will be applied to ensure noise introduced into the marine environment have minimum effect. ROV trencher launch, seabed trenching and trencher recoveries will be conducted in consultation with the MMO.
- 3 In line with “Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters” (NPWS, 2014) “Sound-producing activities shall only commence in daylight hours where effective visual monitoring, as performed and determined by the MMO, has been achieved. Where effective visual monitoring, as determined by the MMO, is not possible the sound-producing activities shall be postponed until effective visual monitoring is possible” and “in waters up to 200m deep, the MMO shall conduct pre-start-up constant effort monitoring at least 30 minutes before the sound-producing activity is due to commence. Sound-producing activity shall not commence until at least 30 minutes have elapsed with no marine mammals detected within the Monitored Zone by the MMO”.
- 4 A project ecologist (separate to the MMO) with sufficient ornithological expertise in the identification of diving seabirds will be onboard. Where the ecologist observes a significant cluster of actively diving birds in the works corridor, within 500 m of the vessel works will be mitigated based on the instruction of the ecologist. This could include slowing vessel cable laying or pausing works if there is potential for significant effect on birds.
- 5 Sufficient resources will be made immediately available on the vessel to deal with accidental oil spills, including hydraulic hoses bursting etc. and reported to the on board ecologist.
- 6 Ballast water discharges from project vessels will be managed under the International Convention for the Control and Management of Ships’ Ballast Water and Sediments standard (International Maritime Law: Ballast Water Management Convention).

Reinstatement

Reinstatement of the subtidal habitats should be carried out to pre-construction conditions. Any concerns in relation to the works process or resulting reinstatement of subtidal habitats to pre-works conditions will be raised with NPWS by the project ecologist prior to the removal of personnel from the site.

Post-lay Monitoring

Given the location of the cable, buried in marine sediments, physical monitoring of the cable would pose an impact on the marine environment. Underwater cables by their nature are passive on/within the seabed. It is not expected that the cable will move, deteriorate or impact on marine habitats over time, unless impacted by anthropogenic /storm influence. As outlined by Carter *et al.* (2009) '*Unless a cable fault develops, the seabed may not be disturbed again within the system's design life.*' Problems, if they arise would be expected to result in a loss of signal and subsequent location of the break/damage and repair. The optical fibres and electrical supply in the cable are monitored 24hours a day from the terminal station, as this is a fundamental function of the cable.

Decommissioning

Once decommissioned, the Beaufort Offshore Cable will be addressed in line with guidance and permissions at that time. It may remain buried in-situ within the subtidal seabed or be removed in line with guidance and consultation. Any works required to decommission this cable will be minor and isolated in nature. All mitigation measures relevant to cable-laying works (including an onboard MMO and ornithological expert) will be implemented at a minimum, during any required decommissioning works.

In-Combination Effects with Identified Projects

As the identified inshore (**FS007361**) and UK elements element of the Beaufort Cable project is likely to result in very similar underwater noise/disturbance effects, the implementation of the proposed subtidal mitigation measures outlined above, and within in 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. It should be noted that, following obtention of all appropriate permissions, the full length of the cable will be laid by a single vessel with mitigation measures in place.

9. Natura Impact Statement Conclusions

The conservation objectives of Natura 2000 sites within the Zone Of Influence of the proposed Beaufort Offshore Cable Route (12nm-EEZ) were assessed.

It was determined that, in the absence of mitigation measures, there is the potential for minor localised disturbance to birds protected as SCIs of Seas Off Wexford SPA and Saltee Islands SPA that may be proximate to the works vessel during the proposed works. Additionally, there is the potential for disturbance impacts on harbour porpoise, harbour seals, bottlenose dolphin, and grey seals via underwater noise during the proposed works. However, these impacts are deemed to be Temporary for the short period of works (less than 2 weeks in total over a 2 month period). Mitigation measures including ecological supervision and compliance with “Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (NPWS, 2014)” will be carried out. A project ecologist will also be onboard the vessel to mitigate impacts on seabirds from proximate SPA’s.

This NIS has involved the examination, analysis and evaluation of all relevant information including, a description of the proposed project, its works methodology, the environment in which the project will be placed, Natura 2000 sites within the ZOI and has applied the precautionary principle in the preparation of the conclusion. It is the professional opinion of the author of this report that there will be no adverse effects on the integrity of any Natura 2000 sites following the implementation of the mitigation measures outlined. The implementation of standard mitigation measures outlined in this report, including mitigation by design of route selection, onsite monitoring, the presence of a MMO, will be sufficient to prevent adverse effects on the integrity of Natura 2000 sites.

The mitigation measures detailed in this NIS have been carefully considered to ensure no adverse effects on the integrity of the following NATURA 2000 sites in light of the site’s conservation objectives and status:

- Seas Off Wexford SPA, Saltee Islands SPA (potential disturbance impacts to seabirds) and,
- Saltee Islands SAC (IE); Slaney River Valley SAC (IE); Rockabill to Dalkey Island SAC (IE); Lambay Island SAC (IE); Roaring Water Bay and Islands SAC (IE); Glengarriff Harbour and Woodland SAC (IE); Kenmare River SAC (IE); Galway Bay Complex SAC (IE); Kilkieran Bay And Islands SAC (IE); Blasket Islands SAC (IE); Slyne Head Islands SAC (IE); Inishbofin and Inishshark SAC (IE); Slieve Tooley / Tormore Island / Loughros Beg Bay SAC (IE); Duvillaun Islands SAC (IE); Inishkea Islands SAC (IE); Horn Head and Rinclevan SAC (IE); Pembrokeshire Marine / Sir Benfro Forol (UK); West Wales Marine / Gorllewin Cymru Forol (UK); Bristol Channel Approaches/Dynesfeydd Môr Hafren (UK); Cardigan Bay / Bae Ceredigion (UK); Lundy (UK); Pen Llyn a’r Sarnau/Lleyn Peninsula and the Sarnau (UK); North Anglesey Marine/Gogledd Môn Forol (UK); Isles of Scilly Complex (UK); Murlough (UK); North Channel (UK); The Maidens (UK); Humber Estuary (UK); Nord Bretagne DH (FR); Mers Celtiques – Talus du golfe de Gascogne (FR); Côte de Granit rose-Sept-Iles (FR); Abers – Côtes des légendes (FR); Trégor – Goëlo (FR); Baie de Morlaix (FR); Ouessant-Molène (FR); Anse de Goulven, dunes de Keremma (FR); Récifs et landes de la Hague (FR); Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay (FR); Anse de Vauville (FR); Banc et récifs de Surtainville (FR); Rade de Brest, estuarie de l’Aulne (FR); Côtes de Crozon (FR); Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire (FR); Chaussée de Sein (FR); Cap d’Erquy-Cap Fréhel (FR); Cap Sizun (FR); Marais du Cotentin et du Bessin – Baie des Veys (FR); Baie de Seine occidentale (FR); Baie de Saint-Brieuc - Est (FR); Récifs du talus du golfe de Gascogne (FR); Chausey (FR); Baie d’Audieme (FR); Littoral Ouest du Cotentin de Bréhal à Pirou (FR); Baie de Lancieux, Baie de l’Arguenon, Archipel de Saint Malo et Dinard (FR); Roches de Penmarch (FR); Côte de Cancale à Parmè (FR); Estuaire de la Rance (FR); Baie du Mont Saint-Michel (FR); Baie de Seine orientale (FR); Littoral Cachois (FR); Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant (FR) (potential impact on harbour porpoise, bottlenose dolphin, grey seal, harbour seal). Standard mitigation measures used for harbour porpoise, bottlenose dolphin, grey seal, and harbour seal.

Based on the assessment of the proposed development alone and in combination with other projects and plans, including the implementation of mitigation measures, it can be concluded that no adverse effects on the sites’ integrity will arise, in view of the site’s conservation objectives.

This report presents a Stage II Natura Impact Statement for the proposed Beaufort Subsea Fibre Optic Cable installation works from IRL 12nm Limit to IRL EEZ Boundary, outlining the information required for the competent authority to screen for appropriate assessment and to determine whether or not the Proposed Development, either alone or in combination with other plans and projects, in view of best scientific knowledge, will adversely affect the integrity of European sites.

On the basis of the content of this report, the competent authority is enabled to conduct an Appropriate Assessment and consider whether, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites conservation objectives, will adversely affect the integrity of the European site **No significant effects will arise on Natura 2000 sites, their features of interest or conservation objectives. The proposed project will not will adversely affect the integrity of European sites.**

10. Data Used for NIS

NPWS site synopses and Conservation objectives of sites within 15km were assessed. The most recent SAC and SPA boundary shapefiles were downloaded and overlaid on Bing road maps and satellite imagery. Consultation with NPWS was carried out in relation to the proposed Beaufort Offshore Cable.

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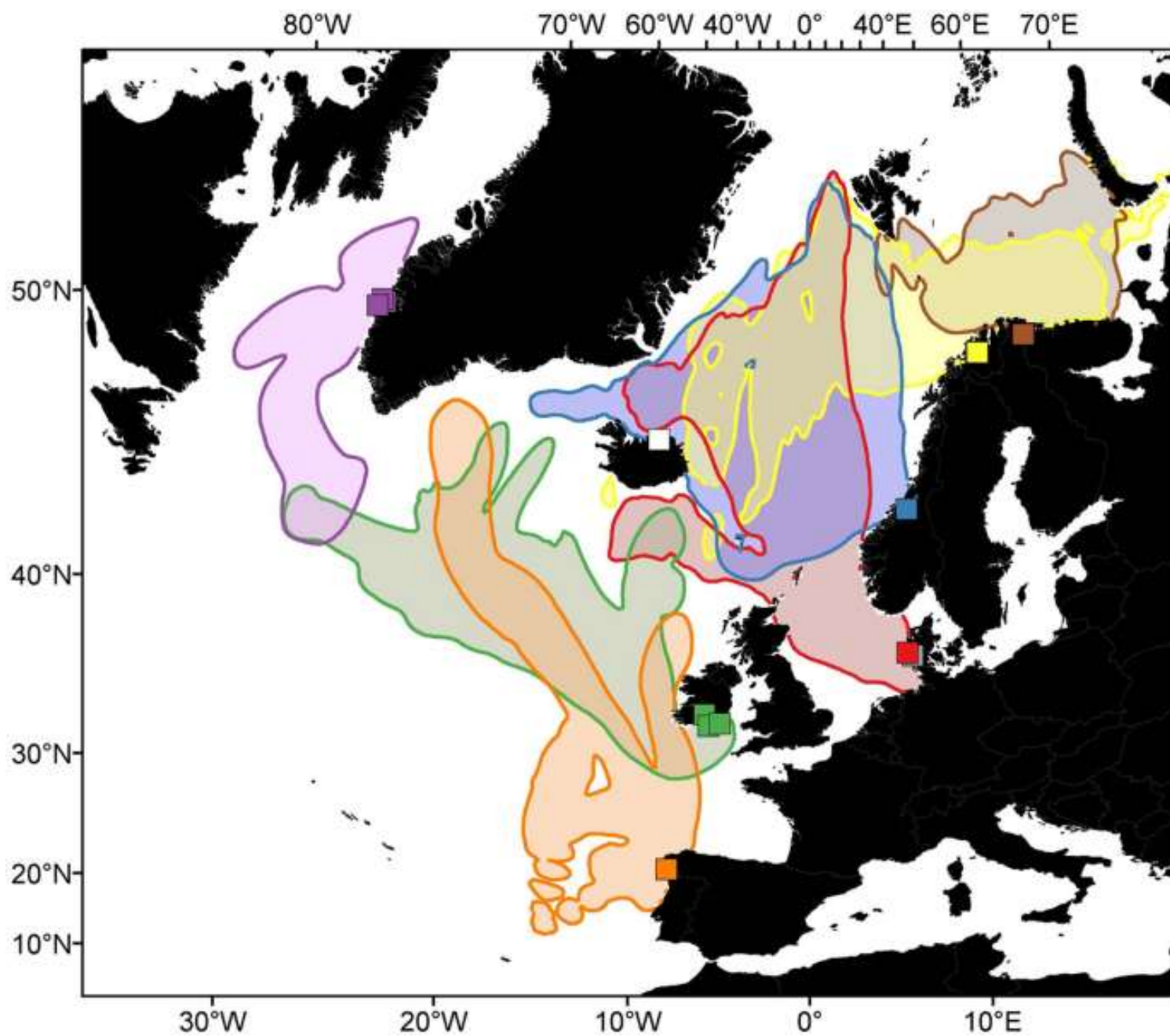


Figure A.1. Area use during the ocean migration of tagged Atlantic salmon (Ireland = Green) (Source: Rikardsen et al., 2021).