



Appropriate Assessment Determination for Maritime Usage Licence Application

Apollo Submarine Cable System Limited

Installation of Fibre Optic subsea telecoms cable and
potential future telecoms maintenance activities in the
Southern Exclusive Economic Zone and Agreed
Continental Shelf

Application Number No. LIC230033

Date: 24th May 2024

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Statement of Authority

This Appropriate Assessment has been undertaken by the Assessment, Research and Development Unit within MARA, a specialist unit with appropriate expertise in environmental assessment.

1 Introduction

1.1 Background

Apollo Submarine Cable System Limited (Apollo Ltd) are seeking a Maritime Usage Licence (MUL) for the proposed installation and operation of the 2Africa Submarine Cable System within the Irish Exclusive Economic Zone (EEZ).

The total extent of the planned cable will extend from Widemouth Bay in Cornwall, England to a number of countries in Europe, Africa, and the Middle East. The total length of the cable will be approximately 45,000km. The proposed new cable will traverse through the offshore areas in Irish waters including the Southern Canyons cSAC, but will not come ashore in Ireland. The cable route will be approximately 127km off the Irish coast at its closest point. The purpose of the MUL will be to install 394km of fibre optic subsea telecoms cable and to potentially carry out future telecoms maintenance activities in the Irish EEZ and agreed Continental Shelf.

1.2 Application documents submitted

The application documents in Table 1.1 were received and reviewed as part of this appropriate assessment. They are available to review at [LIC230033 - MARA - The Maritime Regulator](#).

Table 1.1: Application documents received in relation to LIC230033

Application Documents	Date
Maritime Usage Licence Application	15 th December 2023
Maritime Usage Licence Map	14 th December 2023
Supporting Information for Screening for Appropriate Assessment (SISAA) Report	13 th February 2024
Natura Impact Statement	15 th December 2023
Risk Assessment for Annex IV Species Report	15 th December 2023
Additional information received: <ul style="list-style-type: none">• Assessment of Impact of Maritime Usage (AIMU) Report• Supporting Information for Screening for Appropriate Assessment (SISAA) Report• Natura Impact Statement• Assessment of Impact of Maritime Usage (AIMU) Report	20 th February 2024

1.3 Relevant consultation responses

A 30-day public consultation was undertaken under Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011, commencing on 9th March 2024,

with the public invited to make observations. This public consultation period was closed on 8th April 2024. In addition to the public consultation, observations were invited from the following public bodies: Department of Environment, Climate and Communications, Department of Agriculture, Food and the Marine, Marine Institute, Department of Housing, Local Government and Heritage, Sea Fisheries Protection Authority. A total of five submissions were received on foot of the public consultation, four from public bodies and one from the public. These are outlined in Table 4.3.

1.4 Legislative Context

This appropriate assessment report relates to a maritime usage licence application for an activity in the maritime area in accordance with Part 5 of the Maritime Area Planning Act (2021, as amended). Section 117 sets out the requirements for MARA to undertake appropriate assessment in respect of proposed maritime usage. The EU Habitats Directive (Council Directive 92/43/EC) and Birds Directive (2009/147/EC) are transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and by Part XAB of the Planning and Development Act 2000 (as amended). Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, outline the requirements for screening for appropriate assessment and for undertaking appropriate assessment.

2. Project Description

The applicant has applied for a 25-year licence. The installation period will take approximately 24 days, four of which will be within the Southern Canyons SAC. The 25-year licence period is to allow for potential future maintenance.

2.1 Location

At its nearest point the MUL application area lies approximately 127km off the coast of counties Cork and Kerry. The overall area of this Maritime Usage Licence application is approximately 3.94km² (i.e. 394km of 0.01km wide MUL).

The sediment in the area is largely that of sandy mud, muddy sand and biogenic reef (<https://www.emodnet-seabedhabitats.eu/>). Water depths in the survey area range from approximately 150m to over 4,000m depth at the southern extent of the Irish Continental Shelf.

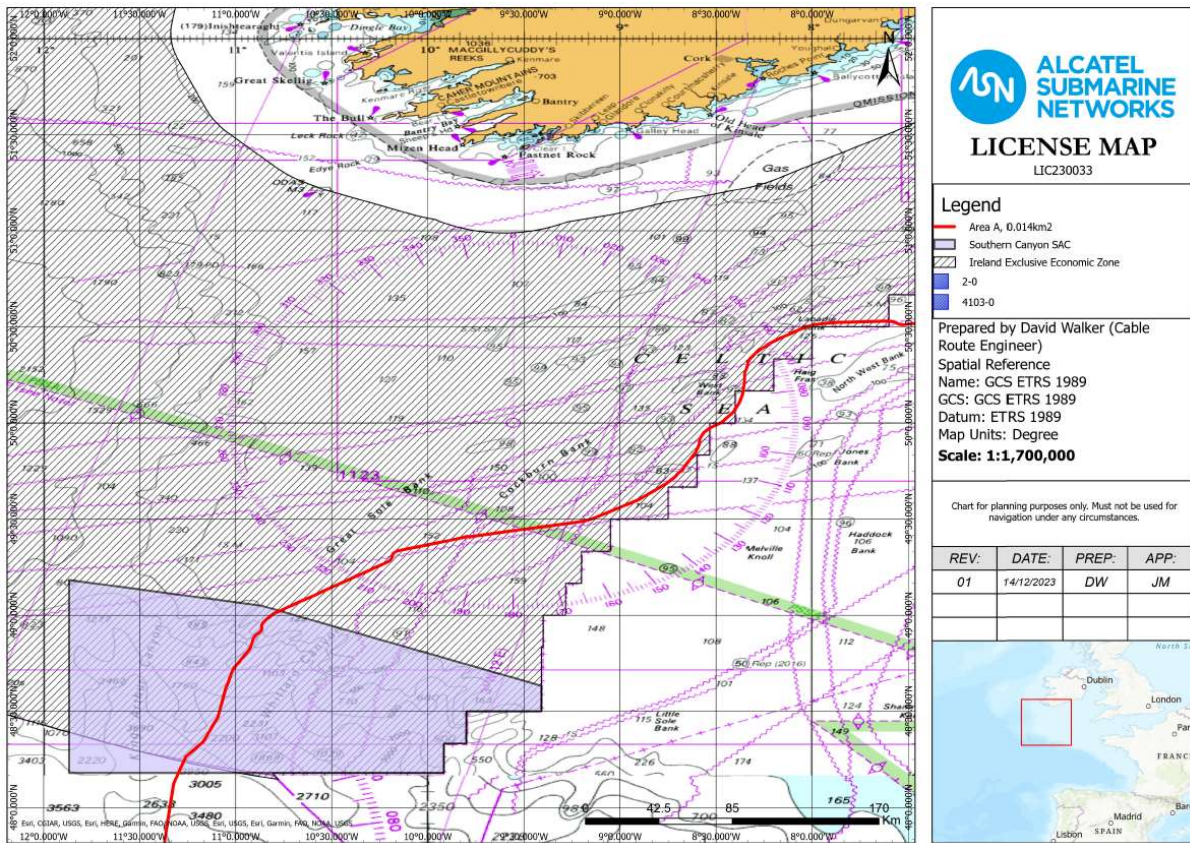


Figure 1 Maritime Usage Licence map

2.2 Description of the Proposed Survey Works

2.2.1 Cable Route Selection & Cable Engineering

During the planning and engineering stage, desktop studies were completed to assess site-specific conditions and areas to avoid when routing the cable, as well as identifying key stakeholders in the area. Some of the key factors assessed during the desktop study include anthropogenic factors (such as fishing, shipping and anchoring), meteorological conditions, oceanographic conditions, geological conditions, marine protected areas, permitting and marine operations.

Prior to the cable installation and burial activities, a Pre-Lay Grapnel Run (PLGR) operation campaign will be conducted only in areas of burial to detect and clear any possible objects or debris along the route so that the trenching tools can operate safely and to maximise burial potential. Any debris recovered during the PLGR operations will be disposed of appropriately onshore. The PLGR operations can be performed by the cable ship or another vessel with specific equipment fitted and the same specification navigation and positioning system as the main lay vessel.

2.2.2 Cable Laying Operations through Ireland’s EEZ and Southern Canyons SAC

Within Ireland’s EEZ and through the Southern Canyons SAC, the cable system will be installed using a dedicated cable lay vessel. The proposed cable system will be predominantly buried by cable plough in water depths up to 1,470m, at which point, ploughing operations will

cease. The main rationale for plough burial is to protect the cable against external aggression; in this case demersal fishing activities i.e. bottom trawling.

At crossings with other in-service cables, the plough will be recovered and the short unburied section is latterly buried by means of a water jetting Remotely Operated Vehicle (ROV).

In some limited areas within Ireland's EEZ, cable burial cannot be conducted due to unavoidable hard bottom conditions or areas of steep seabed slopes, high relief, or similar. The cable will be surface laid from the edge of the Southern Canyons shelf break to deeper water due to steep side slopes and high relief (from approximately 264m to 440m water depth).

Where the cable is to be buried, a plough will be used to a target burial depth of 2m (depending on seabed conditions). The cable will be surface laid whilst traversing an area of hard ground with some boulders at the entry point to the SAC.

At the end of last section of plough burial, the cable will be surface laid thereon to the exit of the Southern Canyons SAC at a water depth of 4,003 metres.

During surface lay operations, the cable slack is such as to follow the seabed contours and remains in contact with the seabed. This laying methodology ensures that the cable remains stable on the seabed without any lateral movement.

During main lay operations, the average operational speed of the vessel during plough burial is 0.3 knots and up to 4 knots (averaging around 500m/hour) for surface lay in waters shallower than 1500m water depth. The speed may need to be adjusted during installation depending on the topography of the area and weather conditions.

A jetting plough will be used for burial, with a target burial depth of between 1.5m and 2m (or to bedrock, whichever is reached first). The plough is in contact with the seabed using its four plough skids and the plough share, which is approximately 0.2m wide. The jets on the plough reduce friction between the plough and the seabed during burial operations. The jets naturally fluidise the seabed ahead of the ploughshare and cable burial, making the burial operation smoother and potentially improving the burial depth (although burial depth is dependent on the nature of the seabed). Temporary track marks are left from the plough which will disappear over time leaving the seabed to its natural state due to sediment movement.

The cable lay vessel will use a dual high accuracy Differential Global Positioning System (DGPS) navigation system to lay the cable as per the target route shown in the Route Position List (RPL).

Acoustic positioning is used to ensure the plough follows the planned route as precisely as possible. The system emits acoustic signals, which are picked up by the transponders. The signals are used to determine the position and orientation of the transponders relative to the transceiver, with high accuracy and precision. The frequency emitted ranges are between 18-55kHz and have a recorded sound pressure level of 192-207dB re1µPa @1m.

The cable will have very limited movement on the seabed once installed as it is held in position under its own weight.

Habitats and Species Assessed

3.1 Appropriate Assessment Screening

MARA carried out a screening for Appropriate Assessment for the installation and potential future telecoms maintenance activities of this subsea fibre optic cable in the southern Exclusive Economic Zone and Continental Shelf and published an appropriate assessment screening determination on 23rd February 2024.

The source-pathway-receptor method was used to assess the potential for likely significant effects (OPR 2021). The source was identified as elements of the proposed project that may effect ecological receptors. The ecological receptors were the Qualifying Interests or Special Conservation Interests in European sites within the Zone of Influence. The Zone of Influence of the project is dependent on the species or habitat under consideration. Only marine and coastal Annex I habitats were considered in the screening process.

3.2 Identification of European sites likely to be affected

The Screening for Appropriate Assessment Report identified 18 Irish designated sites, 7 British and 25 French designated sites which were considered to be within the Zone of Influence of the proposed project. These European sites, the Qualifying Interests and the possible impacts as a result of the proposed project are given in Tables 3.1 below.

Since the finalisation of the Screening for Appropriate Assessment Report, the National parks and Wildlife Service (NPWS) have published a list of proposed updates to the Qualifying Interest species for a number of SAC's, which are relevant to this assessment. These are currently open for public consultation. MARA have included these additional qualifying interests in this Appropriate Assessment (Table 3.1).

3.2.1 Description of the Qualifying Interests affected

Reefs

Reefs are marine features with hard substrate available for colonization by plants and animals. In Irish waters, they range from the intertidal to depths of 4,500m and more than 400km from the coast. Physical processes dictate the type of species that colonize them. Reefs may have a rocky substrate (non-biogenic reefs) or be constructed by animals (biogenic reefs). Reefs is a qualifying interest of the Southern Canyons SAC.

Marine Mammals

Harbour seals occurs in estuarine, coastal and offshore waters but also use a range of intertidal and terrestrial habitats for important life history functions such as breeding, moulting, resting and social activity. Their aquatic range for foraging and inter-site movement extends into continental shelf waters and extends over approximately 450km (Carter et al, 2022). When hauling out ashore Harbour seals tend to prefer comparatively sheltered locations. In Ireland therefore the species is more commonly found ashore in sheltered bays, inlets and enclosed estuaries. Harbour seals are vulnerable to disturbance during periods spent ashore

or in shallow waters whether as individuals or groups. Times spent ashore occur immediately prior to and during the annual breeding season which takes place predominantly during the months of May to July. Specific established sites tend to be used annually for breeding-associated behaviour by adult males, adult females and their new-born pups. Harbour Seal is a qualifying interest of Glengarriff Harbour and Woodland SAC and Kenmare River SAC (Table 3.1).

Grey seals occur in estuarine, coastal and offshore waters but also use a range of intertidal and terrestrial habitats for breeding, moulting, resting and social activity. Its aquatic range for foraging and inter-site movement extends predominantly into continental shelf and slope waters and can extend over 250 km (Carter et al, 2022). Breeding occurs from August to December approximately, with moulting occurring from December to April. Grey seals are vulnerable to disturbance during periods in which time is spent ashore as individuals or in groups. Pups are born on land, usually on remote beaches and uninhabited islands or in sheltered caves. They are nursed there for a period of several weeks by the mother prior to weaning and abandonment. Specific established sites are used annually for breeding-associated behaviour by adult females, adult males, new-born pups and weaned pups. During this period, adult females mate with adult males at or adjacent to these breeding sites. Grey seal is a qualifying interest of Roaringwater Bay and Islands SAC, Saltee Islands SAC and Lleyn Peninsula and the Sarnau SAC (Table 3.1).

Harbour porpoises occur in estuarine, coastal and offshore waters. Their distribution extends throughout continental shelf waters where it can range over many hundreds or thousands of kilometres. Group sizes tend to be small, commonly 2-3 individuals although larger aggregations may occasionally be recorded, particularly in the summer months. Harbour porpoise breeds annually in Ireland; the principal calving period in Irish waters is thought to occur in the months of May and June, although it may extend throughout the summer months and early autumn. New-born calves are weaned before they are one year old. Mating commonly occurs several weeks after the calving season. Harbour porpoise feeds on a wide variety of fish, cephalopod and crustacean species occurring in the water column or close to the seabed. Dive depths in excess of 200m have been recorded for the species. Foraging areas for harbour porpoise are often associated with areas of strong tidal current and associated eddies, and are commonly seen close to shore or adjacent to islands and prominent. Harbour porpoise is a qualifying interest in 37 SACs within the Celtic and Irish Seas management unit for this species (JNCC, 2023) (Table 3.1).

Bottlenose dolphins occur in estuarine, coastal and offshore waters where they carry out breeding, foraging, resting, social activity and other life history functions. Distribution extends throughout continental shelf and slope waters and groups have also been recorded in waters more than 2,500m deep. Several resident coastal populations are described in western European waters; however, individuals and/or groups of the species may also range over many

hundreds or thousands of kilometres. The species breeds annually in Irish waters and indications are that the birth and early rearing of new-born calves takes place predominantly during the summer and early autumn months (i.e. May to September). Bottlenose dolphin is a successful aquatic predator that feeds on a wide variety of fish (e.g. mackerel, horse mackerel, salmonids, gadoids, eels, flatfish and dogfish), cephalopods (e.g. squid) and occasionally crustacean species that occur in the water column or close to or within the seabed. Foraging areas for bottlenose dolphin are often associated with areas of strong tidal current and associated eddies; therefore foraging dolphins are often sighted close to shore or adjacent to cliffs, islands, prominent headlands and tidal narrows. Bottlenose Dolphin is a qualifying interest in 27 SACs in the Offshore Channel, Celtic Sea and South West England management unit (JNCC, 2023) (Table 3.1).

Table 3.1: Special Areas of Conservation (SAC) and their qualifying interests which were considered further after the screening process. This includes proposed QI's for a number of SAC sites, as advertised by the Minister on 27 March 2024, marked with an asterisk*.

Site and Code	Distance from Survey Area	Qualifying Interests	Potential source of impact
Southern Canyons SAC [Site code IE002278]	Overlaps	Reefs [1170]	Physical disturbance and habitat loss
Belgica Mound Province SAC [Site code IE002327]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349]* Phocoena phocoena (Harbour Porpoise) [1351]*	Disturbance from underwater noise
Roaringwater Bay and Islands SAC [Site code IE000101]	142km/Within MU for Harbour Porpoise	Halichoerus grypus (Grey Seal) [1364] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise
Hook Head SAC [Site code IE000764]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349]* Phocoena phocoena (Harbour Porpoise) [1351]*	Disturbance from underwater noise
Carnsore Point SAC [Site code IE002269]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]*	Disturbance from underwater noise

Blackwater Bank SAC [Site code IE002953]	Within MU for Harbour Porpoise	Phocoena phocoena (Har- bour Porpoise) [1351]*	Disturbance from underwater noise
Glengarriff Harbour and Woodland SAC [Site code IE00090]	172km	Phoca vitulina (Harbour Seal) [1365]	Disturbance from underwater noise
Blasket Islands SAC [Site code IE002172]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise
Saltee Islands SAC [Site code IE0007071]	174 km	Halichoerus grypus (Grey Seal) [1364]	Disturbance from underwater noise
Kenmare River SAC [Site code IE0007071]	187km/ Within MU for Harbour Porpoise	Phoca vitulina (Harbour Seal) [1365] Phocoena phocoena (Harbour Porpoise) [1351]*	Disturbance from underwater noise
Rockabill to Dalkey SAC [Site code IE003000]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noisesh
Lambay Island SAC [Site Code IE000204]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]*	Disturbance from underwater noise
Codling Fault Zone SAC [Site code IE003015]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]*	Disturbance from underwater noise
Lower River Shannon SAC [Site code IE002165]	Within MU for Bottlenose Dolphin	Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Disturbance from underwater noise.
Inishmore Island SAC [Site code IE000213]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]*	Disturbance from underwater noise
Kilkieran Bay and Islands SAC [Site code IE002111]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]*	Disturbance from underwater noise
West Connacht Coast SAC [Site code IE002998]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Disturbance from underwater noise.

		Phocoena phocoena (Harbour Porpoise) [1351]*	
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC [000625]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]*	Disturbance from underwater noise
Pembrokeshire Marine/ Sir Benfro Forol SAC [UK0013116]	186 km	Halichoerus grypus (Grey Seal) [1364]	Disturbance from underwater noise
Llyn Peninsula and the Sarnau / Pen Llyn a`r Sar [Site code UK0013117]	Within MU for Bottlenose Dolphin	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Halichoerus grypus (Grey Seal) [1364]	Disturbance from underwater noise
Cardigan Bay [UK0012712]	Within MU for Bottlenose dolphin	Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Disturbance from underwater noise
North Anglesey Marine / Gogledd Môn Forol [UK 0030398]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
West Wales Marine / Gorllewin Cymru Forol [UK 0030397]]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
North Channel [UK 0030399]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Bristol Channel Approaches / Dynesfeydd Môr Hafren [UK0030396]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Mers Celtiques – Talus du golfe de Gascogne [FR5302015]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.

Récifs du talus du golfe de Gascogne [FR5302016]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Nord Bretagne DH [FR2502022]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
hOuessant-Molène [FR5300018]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Abers - Côte des legends [FR5300017]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Chaussée de Sein [FR5300016]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Baie de Morlaix [FR5300015]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Côte de Granit rose-Sept-Illes	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Côtes de Crozon [FR5302006]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Trégor – Goëlo [FR5300010]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.

Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay [FR5300008]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Récifs et landes de la Hague [FR2500084]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Anse de Vauville [FR2502019]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Baie de Saint-Brieuc – Est [FR5300066]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Cap d’Erquy-Cap Fréhel [FR5310095]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Banc et récifs de Surtainville [FR2502018]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Baie de Lancieux, Baie de l’Arguenon, Archipel de Saint Malo et Dinard [FR5310012]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire [FR2500085]	Within MU for Bottlenose dolphin	Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Disturbance from underwater noise
Côte de Cancale à Parmè [FR5300052]	Within MU for Bottlenose dolphin	Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Disturbance from underwater noise

Estuaire de la Rance [FR5300061]	Within MU for Harbour Porpoise	Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Baie du Mont Saint- Michel [FR5300077]	Within MU for Bottlenose Dolphin & Harbour Porpoise	Tursiops truncatus (Common Bottlenose Dolphin) [1349] Phocoena phocoena (Harbour Porpoise) [1351]	Disturbance from underwater noise.
Baie de Seine occidentale [FR2502021]	Within MU for Bottlenose dolphin	Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Disturbance from underwater noise
Baie de Seine orientale [FR2502021]	Within MU for Bottlenose dolphin	Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Disturbance from underwater noise
Littoral Cauchois [FR2300139]	Within MU for Bottlenose dolphin	Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Disturbance from underwater noise
Falaises du Cran aux Oeufs et du Cap Gris- Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant [FR3100478]	Within MU for Bottlenose dolphin	Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Disturbance from underwater noise

3.2.2 Description of Species of Conservation Interest

No SPAs were identified, through the screening process, to be in the Zone of Influence of this project.

3.2.3 Conservation Objectives of Habitats and Species likely to be affected

Conservation objectives are intended to define as precisely as possible the desired state or degree of conservation to be reached in a particular site. The measures taken under the Habitats Directive are to ensure that the species and habitats listed in the Annexes achieve Favourable Conservation Status.

The Favourable Conservation Status of a species is achieved when:

- the population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats.
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The Conservation Objectives and National Conservation Status for the SACs and qualifying interests that were screened in are presented in Table 3.3.

Table 3.3: Conservation Objectives and their most recent National Conservation Status (2013-2018) for Qualifying Interest (QI) species in SACs under consideration.

Site Name and Qualifying Interest	Conservation Objective ¹	National Conservation Status
Southern Canyons SAC [Site code IE002278] Reefs [1170]	To maintain or restore the favourable conservation condition of Reefs in the SAC	Inadequate
Belgica Mound Province SAC [Site code IE002327] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable
Roaringwater Bay and Islands SAC [Site code IE000101] <i>Halichoerus grypus</i> (Grey Seal) [1364] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	To maintain favourable conservation condition of Grey Seal and Harbour Porpoise in the SAC	Favourable Favourable
Hook Head SAC (Site code: IE000764) <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]* <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Bottlenose Dolphin and Harbour Porpoise in the SAC	Favourable Favourable
Carnsore Point SAC (Site code: IE002269) <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable Favourable
Blackwater Bank SAC (Site code: IE003000) <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable
Glengarriff Harbour and Woodland SAC [Site code IE00090] <i>Phoca vitulina</i> (Harbour Seal) [1365]*	To maintain favourable conservation condition of Harbour Seal in the SAC And Harbour P	Favourable
Blasket Island SAC [Site code IE002172] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable
Saltee Islands SAC [Site code IE0007071] <i>Halichoerus grypus</i> (Grey Seal) [1364]	To maintain favourable conservation condition of Grey Seal in the SAC	Favourable
Kenmare River SAC [Site code: IE 002158]	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable

¹ No conservation objectives associated with the French designated sites.

<i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*		
Rockabill to Dalkey SAC [Site code IE003000] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable
Lambay Island SAC [Site code IE000204] <i>Halichoerus grypus</i> (Grey Seal) [1364] <i>Phoca vitulina</i> (Harbour Seal) [1365] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Grey Seal, Harbour Seal and Harbour Porpoise in the SAC	Favourable Favourable Favourable
Codling Fault Zone SAC [Site code IE003015] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable
Lower River Shannon SAC [Site code IE002165] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	To maintain favourable conservation condition of Bottlenose Dolphin in the SAC	Favourable
Inishmore Island SAC [Site code IE000213] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable
Kilkieran Bay and Islands SAC [Site code IE002111] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable
West Connacht Coast SAC [Site code IE002998] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC [000625] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]*	To maintain favourable conservation condition of Harbour Porpoise in the SAC	Favourable
Pembrokeshire Marine/ Sir Benfro Forol SAC [UK0013116] <i>Halichoerus grypus</i> (Grey Seal) [1364]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Grey Seal in UK waters	Favourable
Llyn Peninsula and the Sarnau / Pen Llyn a`r Sar [Site code UK0013117] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349] <i>Halichoerus grypus</i> (Grey Seal) [1364]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Bottlenose Dolphin and Grey Seal in UK waters	Favourable

Cardigan Bay [UK0012712] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Bottlenose Dolphin in UK waters	Favourable
North Anglesey Marine / Gogledd Môn Forol [UK 0030398] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters	Favourable
West Wales Marine / Gorllewin Cymru Forol [UK 0030397] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters	Favourable
North Channel [UK 0030399] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters	Favourable
Bristol Channel Approaches / Dynesfeydd Môr Hafren [UK0030396] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters	Favourable
Mers Celtiques – Talus du golfe de Gascogne [FR5302015] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Récifs et landes de la Hague [FR2500084] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	See footnote 1	Unfavourable - Bad
Nord Bretagne DH [FR2502022] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Badv
Ouessant-Molène [FR5300018] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Abers - Côte des legends [FR5300017] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad

Chaussee de Sein [FR5300016] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Baie de Morlaix [FR5300015] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	See footnote 1	Unfavourable - Bad
Côte de Granit rose-Sept-Iles [FR5300009] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Côtes de Crozon [FR5302006] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	See footnote 1	Unfavourable - Bad
Tregor Goëlo Est [FR5300010] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Recifs et lands de la Hague [FR2500084] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Anse de Vauville [FR2502019] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Baie du Saint-Brieuc [FR300066] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Cap d'Erquy-Cap Fréhel [FR5300011] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Banc et récifs de Surtainville [FR2502018] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard [FR5300012] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	See footnote 1	Unfavourable - Bad
Récifs et marais arrière-littoraux du Cap Lévi à la Pointe de Saire [FR2500085] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad
Côte de Cancale à Parmè [FR5300052] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable - Bad

Estuaire de la Rance [FR5300061] Phocoena phocoena (Harbour Porpoise) [1351]	See footnote 1	Unfavourable – Bad
Baie du Mont Saint-Michel [FR5300077] Phocoena phocoena (Harbour Porpoise) [1351] Tursiops truncatus (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable – Bad
Baie de Seine occidentale [FR2502021] Tursiops truncatus (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable – Bad
Baie de Seine orientale [FR2502021] Tursiops truncatus (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable – Bad
Littoral Cauchois [FR2300139] Tursiops truncatus (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable – Bad
Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant [FR3100478] Tursiops truncatus (Common Bottlenose Dolphin) [1349]	See footnote 1	Unfavourable – Bad

3.2.4 Pressures and threats to Annex II Habitats and Species

The most recent Habitats Directive Article 17 report (NPWS 2019) identified the main pressures and threats to individual Annex II species to reaching Favourable Conservation Status (Table 3.4).

Table 3.4: Pressures and Threats on Annex II species as assessed for the 2019 Article 17 report.

Annex II Species	Pressure	Threat
Reefs [1170]	<p>G01 Marine fishing and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (H)</p> <p>G03 Marine fish and shellfish harvesting (professional, recreational) activities causing physical loss and disturbance of seafloor habitats (H)</p>	<p>G01 Marine fishing and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (H)</p> <p>G03 Marine fish and shellfish harvesting (professional, recreational) activities causing physical loss and disturbance of seafloor habitats (H)</p>

Grey Seal [1364]	C09 Geotechnical surveying (M) G01 Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (M)	C09 Geotechnical surveying (M) G01 Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (M)
Harbour seal [1365]	C09 Geotechnical surveying (M) G01 Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (M)	C09 Geotechnical surveying (M) G01 Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (M)
Harbour Porpoise [1351]	C09 Geotechnical surveying (M) G01 Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (M)	C09 Geotechnical surveying (M) G01 Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (M)
Bottlenose dolphin [1349]	C09 Geotechnical surveying (M) G01 Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (M)	C09 Geotechnical surveying (M) G01 Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (M)

It should be noted that under the European Environment Agency guidance on Article 17 guidance noise pollution from marine seismic surveys was to be reported under C09 Geotechnical Surveying.

4 Assessment of Impacts

4.1 In-combination effects

Article 6(3) of the Habitats Directive requires that an Appropriate Assessment be carried out in respect of any plan or project that is likely to have a significant effect on one or more European sites, either individually or in combination with other plans or projects. Therefore, regardless of whether or not the likely or possible effects of a plan or project are significant when considered in isolation, the potential for the plan or project to significantly affect European sites in combination with other past, present or foreseeable future plans or projects must also be assessed.

In-combination screening for cumulative effects has been undertaken following the approach outlined in the European Commission *Notice Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive* (EC, 2021). This screening has also had regard to European and National guidance documents and is based on professional and scientific judgment. Under Article 6(3), the ‘in combination’ provision applies both to Stage 1 Screening and to Stage 2 Appropriate Assessment.

Relevant Plans/Projects

The cumulative effects provision applies to the following plan/project types:

- Projects that are completed,
- Projects approved but uncompleted,
- Proposed projects, (projects applied for and under consideration but not approved by the relevant consenting authority or projects known to MARA),
- Plans that are completed,
- Plans approved but uncompleted,
- Proposed plans,
- Proposals in adopted plans,
- Proposals in finalised draft plans formally published or submitted for consultation or adoption

As per European guidance, it is recommended that plans and projects that are not yet proposed do not generally have to be taken into account in the assessment of in-combination effects, even if they are part of an overarching masterplan. The exception is where the project is considered to be functionally interdependent with the development before the competent authority. An example of this is a site investigation for a proposed offshore windfarm that has received a MAC. The consideration of in-combination effects is not restricted to similar project/plan types covering the same sector of activity (e.g. a series of offshore wind farms). All types of plans or projects that could, in-combination with the project under consideration, have a significant effect, should be taken into account.

Although already completed plans and projects are themselves excluded from the assessment requirements of Article 6(3), it is still important to take them into consideration when assessing the effects of the current plan or project in order to determine whether there are any potential cumulative effects arising from the current project in combination with other completed plans and projects.

Using professional and scientific judgement, the key steps for assessing cumulative effects are as follows:

1. Defining the Cumulative Effects Spatial Scope (CESS)
2. Defining the Cumulative Effects Temporal Scope (CETS)
3. Impact identification
4. Pathway identification
5. Prediction
6. Identification of Plans or Projects that could act in combination
7. Screening Stage Cumulative Effects Assessment conclusion

8. Managing cumulative impacts - to be carried out as part of Stage 2 AA process

1. Defining the Cumulative Effects Spatial Scope (CESS)

Impacts of noise associated with the planned survey activities are considered to have the widest spatial reach, with Harbour porpoise the designated Natura 2000 site feature which is most sensitive to noise disturbance. The *JNCC Guidance on Assessing the Significance of Noise Disturbance against Harbour Porpoise SACs Conservation Objectives* (JNCC, 2020) has therefore been used to determine the boundary for examination of cumulative effects. The guidance uses published ranges for effects of noise from different noise producing activities to determine Effective Deterrence Ranges (EDRs).

Table 4.1 Survey equipment noise sources and associated Effective Deterrence Ranges (EDR).

Noise source	Operating frequency (kHz)	Sound Pressure Level (dB re 1 μ Pa @ 1m)	EDR (JNCC 2020)
SBEC	50 - 300 kHz	160-175 dB	5km using EDR range for geophysical activity.
MBES	200 kHz	221 dB	5km using EDR range for geophysical activity.
SSS	400 kHz	198 dB	5km using EDR range for geophysical activity.
SBP - parametric	300 – 900 kHz	220 - 230 dB	5km using EDR range for geophysical activity.
SBP - boomer	2 - 115 kHz	232 dB	5km using EDR range for geophysical activity.
Acoustic Corer	0.5 - 5 kHz	205 – 211 dB	5km using EDR range for geophysical activity.
Sub-bottom Imager	1.5 – 12 kHz	195 dB	5km using EDR range for geophysical activity.
USBL	4.5 – 12.5 kHz	190 dB	5km using EDR range for geophysical activity.
Seismic CPT	0.001 – 0.12 kHz	145 dB	12km using EDR range for geophysical activity.

In line with Table 4.1 above, the EDR has been conservatively chosen as 5km (the EDR for USBL), with projects within this range judged to be within the CESS.

2. Defining the Cumulative Effects Temporal Scope (CETS)

The temporal scope for examination of cumulative effects has been defined considering the period over which the licence activities would take place. A licence period of 25 years is being sought for this project. The Cumulative Effects Temporal Scope (CETS) is therefore 25 years.

3. Impact identification

The impacts identified are:

- Physical disturbance and habitat loss, and
- Disturbance from underwater noise

4. Pathway Identification

Table 4.2 Pathway Identification

Impact	Potential Cumulative Pathway
Physical disturbance and habitat loss	Pathway possible via direct contact with habitat with impacts possible within CESS where there is temporal over-lap with other physical contact producing projects
Disturbance from underwater noise	Pathway possible via sound travelling through water with impacts possible within CESS where there is temporal overlap with other underwater noise producing projects.

5. Prediction

The magnitude and extent of identified likely cumulative effects have been predicted below following EC 2021 guidance.

Physical disturbance and habitat loss

There is a direct overlap between the proposed Maritime Usage Licence area and the Southern Canyons SAC. There is a possible direct impact from the proposed works on Annex I Habitat Reefs. There is the potential for increased physical disturbance and habitat loss if other similar acoustic projects were to take place at the same time. Therefore, significant likely cumulative effects will be considered further.

Disturbance from underwater noise

There is the potential for increased underwater noise disturbance effects if the cable laying works and other similar acoustic projects were to take place at the same time. Therefore, significant likely cumulative effects will be considered further.

6. Identification of Plans or Projects that could act in combination

Following the approach outlined by (EC, 2021), which suggests that information regarding “characteristics of other plans or projects (implemented, approved or proposed) that may cause in-combination or cumulative effects with the project being assessed on Natura 2000 sites” should be sourced from databases (e.g. on SEA, EIA, appropriate assessments of plans/projects, regional or municipal plans, local authority planning applications) available from Competent Authorities, all plans and projects within the CESS and CETS have been identified.

All consented activities/developments and applications for activities or development within the CESS and CETS have been considered for their potential to cause cumulative effects in combination with the site investigation activities proposed under this Maritime Usage Licence Application, on the qualifying interests of Special Areas of Conservation and Special Protection Areas.

Searches were conducted of the following:

- Applications and lease/licence database of the Department of Housing, Local Government and Heritage
- General internet search (for master plans, etc)
- The Maritime Area Regulatory Authority’s databases
- EPA Website

7. Screening Stage Cumulative Effects Assessment conclusion

Based on a review of Foreshore Applications, MARA Licence Applications and the EIA portal, there are no projects located within 10km of the proposed 2Africa cable route within the Irish EEZ that are either completed or are currently going through planning stages.

The closest identified project within the Irish EEZ is the EirGrid Celtic Interconnector Electricity Cable (Foreshore licence number FS006916) which passes by this proposed cable approximately 30km at its nearest point.

Relevant Plans:

The following plans, related to the development of the maritime environment were also identified:

- The Climate Action Plan 2023
- South Coast Designated Maritime Area Plans

These plans promote sustainable development in the maritime environment and particularly Ireland’s Climate Action Plan’s renewable electricity target of 80% of energy generated from renewable electricity sources by 2030.

No plans or projects have been identified in the CESS.

Likely significant in-combination effects on the conservation objectives of Natura 2000 sites considered in this report **can be excluded** at this stage.

4.2 Assessment of Likely/Possible Significant Impacts on European Sites

4.2.1 Impacts to Annex I Habitats

The impact of the proposed project at screening was identified as physical disturbance and habitat loss to the Annex I Habitat Reefs. This disturbance may cause physical damage to the reef structure and the displacement of individuals, changes in species behaviour, or the risk of morbidity or mortality. The route selected has been selected as the route that will cause minimal impacts on sensitive ecosystems. As a result the route selection prioritised routing away from Reef habitat along the cable route and within the Southern Canyons cSAC.

Mitigation

The MUL will require the Holder to maintain their marine positional log and have it available for the inspection by MARA to ensure the agreed cable route is adhered to. In addition, the Holder shall only use the part of the maritime area as shown in the red lined area in the map in their licence.

4.2.2 Impacts to Annex II Species

The impact of the proposed project at screening was identified as disturbance from underwater noise to Grey and Harbour seal, Bottlenose dolphin and Harbour porpoise.

Marine mammals depend on sound for a wide range functions including navigation, perception of their environment, communication, prey identification and capture, and the detection of predators. The hearing system of marine mammals, being highly sensitive and adapted to respond to changes in pressure in an aquatic environment, is particularly susceptible to damage. Auditory injury in marine mammals can be defined as a permanent threshold shift (PTS) leading to non-reversible auditory injury, or as a temporary threshold shift (TTS) in hearing sensitivity, which can have negative effects on the ability to communicate, navigate, or locate prey for a period of minutes, hours or days.

Mitigation

Appropriate mitigation for the effects of underwater noise on marine mammals is the implementation of the National Parks and Wildlife's guidance on risk to marine mammals from man-made sound in the marine environment (NPWS, 2014).

4.3 Submissions from Public Consultation Phase

Table 4.3 gives a summary of the submissions made at public consultation stage and MARA's response.

Table 4.3: Consultation responses received

Submission	MARA Response
Department of Housing Local Government and Heritage (DHLGH – National Monuments Service)	
<p>DHLGH notes that the AIMU Report contains reference to records of historic and modern wrecks within the Licence Application Area. DHLGH recommended that conditions be attached to the Maritime Usage Licence, should it be granted, summarised as follows;</p> <ul style="list-style-type: none"> - Appointment of an experienced underwater archaeologist to supervise on all archaeological aspects of the project; - An Underwater Archaeological Impact Assessment (UAIA) report to be undertaken prior to the construction works taking place. - A Protocol for Archaeological Discoveries shall set out the procedure for reporting discoveries of confirmed/potential archaeological significance. 	<p>MARA notes the comments from the National Monuments Service. The ARD recommends that a condition be included in the licence that the applicant consults and complies with the requirements of the underwater archaeology unit of the Department of Housing, Local Government and Heritage.</p>
Marine Institute	
<p>The Marine Institute (MI) observe that there are no licensed aquaculture sites along, or close to, the proposed cable route.</p> <p>The MI further notes the likely commercial fishing activity within the proposed route and that potential interaction with fishing activity may occur.</p> <p>Table 2.2 of the AIMU report indicates the timing of cable laying activities within the SAC. Important to clarify the duration required to surface lay the final leg of 52.3km, as 0.3 days for this distance would seem ambitious.</p> <p>The MI notes that Table 4 of MARA Screening report identifies one qualifying interest (Reefs [1170]) for the Southern Canyons SAC. However, the NPWS website for this SAC identifies an additional QI - <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349], for this site. It would be important that this be clarified before progressing further.</p> <p>Section 3.4.3 of the MARA Screening report, all Special Protection Areas (SPAs) are excluded on the basis the activity is likely outside the zone of influence (ZOI) of foraging seabirds. Further clarification should be provided on the identification</p>	<p>MARA notes the comments from the Marine Institute (MI). MARA notes the absence of aquaculture sites but the potential interaction with commercial fishing activity that may occur.</p> <p>In relation to the timing of the cable laying, the licence period applied for is 25 years.</p> <p>MARA contacted the NPWS in relation to the inclusion of the bottlenose dolphin on their website for the Southern Canyons SAC. NPWS stated that the bottlenose dolphin is included in error on their website with respect to the Southern Canyons SAC.</p> <p>Further clarification shall be provided on the identification of the ZOI for SPA features, given the ZOI for seabirds is not defined and that</p>

<p>of the ZOI for SPA features, given the ZOI for seabirds is not defined and that some seabird species have very extensive foraging ranges.</p> <p>The MI notes in Section 3.5.2, of the MARA Screening report, the inclusion of non-Annex II species. The cetaceans listed are considered as Annex IV species and are therefore, considered, in full, in the Annex IV reporting. The MI notes there is little basis for their additional inclusion in the AA screening report.</p> <p>The MI notes the duration of 25 years seems long for a licence and as such, little information or assessment is provided on any likely effects (if any) during the operational phase.</p>	<p>some seabird species have very extensive foraging ranges.</p> <p>MARA notes the comments from the MI in relation to Annex IV species.</p> <p>MARA notes the comments from the MI in relation to the licence period extent to allow for future maintenance.</p>
Department of the Environment, Climate and Communications (DECC)	
<p>DECC noted the purpose of the licence application and stated that they are supportive of the proposed project provided there are no negative environmental impacts.</p>	<p>MARA notes the submission from DECC. The ARD will recommend that any licence issued will include conditions to ensure there are no negative environmental impacts as a result of the proposed activity in the maritime area.</p>
Department of Agriculture, Food and the Marine (DAFM)	
<p>DAFM noted this activity does not fall within the remit of the EIA (Agriculture) Regulations under DAFM and therefore, once relevant environmental and planning regulations are met, DAFM has no comment at this stage of the consultation process.</p>	<p>MARA notes the DAFM have no comment at this stage.</p>
Public Submissions	
<p>Smart Africa Secretariat made a submission requesting support from MARA on the application of 2Africa cable, seeking a licence to transit through the Irish Exclusive Economic Zone (EEZ).</p>	<p>MARA notes the comments in the submission.</p>

4.4 Transboundary effects

No transboundary effects will result from this proposed project.

4.5 Mitigation Measures

1. Marine Mammals
 - i. The Holder shall appoint a Marine Mammal Observer for the purposes of overseeing the activity. The Marine Mammal Observer shall satisfy the requirements of the National Parks and Wildlife Service.
 - ii. The Holder shall implement risk control and mitigation measures for marine mammals in accordance with National Parks and Wildlife Service *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters*.
2. The Holder shall as a minimum keep the following documents together and available for inspection by the MARA:
 - i. a copy of the licence related to this maritime usage;
 - ii. all correspondence with the MARA;
 - iii. up to date drawings, plans and maps relating to the maritime usage;
 - iv. marine positional log; and,
 - v. any elements of the licence application and associated documentation referenced in this licence.
3. The Holder shall use that part of the maritime area as shown lined red on the attached drawing titled: *Maritime Usage Licence Map 1 of 1 LIC230033 Dated: 20/02/2023 Drg. No.: MUL230033-001 Rev.: A* the subject matter of this licence, for the purposes as outlined in the application and for no other purposes whatsoever.
4. The Holder shall ensure that the maritime usage is carried out and completed in accordance with the conditions of this licence.

4.6 Appropriate Assessment Conclusion

The applicant provided a Natura Impact Statement (NIS), which detailed the potential impact of the proposed project on relevant European sites and whether these impacts would adversely affect the integrity of the sites in light of their conservation objectives.

The screening process identified possible significant impacts as a result of physical disturbance and habitat loss on the Annex I habitats and given that the cable laying works in the Southern Canyon SAC will involve both plough burial and surface lay techniques the potential for significant effects could not be ruled out.

Underwater noise was also screened in for marine mammals in the Appropriate Assessment Screening process. Likely significant/possible impacts as a result of underwater noise from geophysical surveys on Annex II species of marine mammals from 49 SACs could not be ruled out without mitigation.

Mitigation measures were identified to ensure that impacts on European sites and their qualifying interests would not occur. Therefore, with adherence to these measures and in view of best scientific knowledge and of the sites' conservation objectives, the project,

individually or in combination with other plans or projects, will not have adverse effects on European sites.

Therefore, having considered the documents submitted by Apollo and the observations received from the public consultation on the application, along with my own assessment in this report, it can be concluded, and I conclude, for the purposes of Article 6(3) of the Habitats Directive and Regulation 42(11) of the Birds and Natural Habitats Regulations, that the proposed site investigation activities for Marine Usage Licence application LIC230033 (either individually or in combination with any other plans or projects) will not adversely affect the integrity of any European sites, in view of the sites' conservation objectives, subject to the implementation of the mitigation measures adopted and outlined in Section 4.6 of this report which must be included as conditions to any consent that may be granted in respect of the Apollo application.

4.7 Appropriate Assessment Determination

The Appropriate Assessment Screening process determined that likely significant effects could not be ruled out with respect to disturbance to species at a number of European sites within the Zone of Influence of the proposed project.

In accordance with Regulation 42(6) of the European Communities (Birds and Natural Habitats) Regulations 2011 SI 477 as amended, the Maritime Area Regulatory Authority made a determination following screening that an Appropriate Assessment was required as the project, individually or in combination with other plans or projects, is likely to have a significant effect on the integrity of European sites, in view of the said sites' conservation objectives.

The Maritime Area Regulatory Authority undertook an Appropriate Assessment. Measures to mitigate against the likely significant effects of the proposed project are identified in the Appropriate Assessment Report, as restated above. These mitigation measures will be included as licence conditions. Strict adherence to these measures is considered appropriate mitigation to avoid significant effects on the conservation objectives of any European site.

On this basis I have determined that the proposed project, either alone or in-combination with other projects, will not adversely affect the integrity of any European Site.

Signature and Date of Author	 Mary Hegarty Marine Advisor 24 th May 2024
Signature and Date of Reviewer	 John Evans Director of Assessment, Research and Data 24 th May 2024

5 References and Conservation Objectives

Conservation Objectives:

Site specific conservation objectives for SAC and SPA sites listed in this report are available from: [Protected Sites in Ireland | National Parks & Wildlife Service \(npws.ie\)](https://www.npws.ie/protected-sites-in-ireland)

Site specific conservation objectives for UK sites are available from: <https://jncc.gov.uk/our-work/uk-protected-areas/>

Site specific conservation objectives for the French sites were not available at the time of writing.

References:

Carter et al, 2022 - Sympatric Seals, Satellite Tracking and Protected Areas: Habitat-Based Distribution Estimates for Conservation and Management, *Frontiers in Marine Science*, v9 2022.

JNCC, 2020 - JNCC (2020). Guidance for assessing the significance of noise disturbance against Conservation Objectives of Harbour porpoise SACs (England, Wales & Northern Ireland). JNCC Report No. 65.

JNCC 2023 - IAMMWG. 2023. Review of Management Unit boundaries for cetaceans in UK waters (2023). JNCC Report 734, JNCC, Peterborough, ISSN 0963-8091.

OPR 2021 - Office of the Planning Regulator, March 2021 OPR Practice Note PN01, <https://www.opr.ie/wp-content/uploads/2021/03/9729-Office-of-the-Planning-Regulator-Appropriate-Assessment-Screening-booklet-15.pdf>

NPWS 2019 - Article 17 Species Conservation Assessments 2019 Volume 3, Unpublished report, National Parks and Wildlife Service, Dublin. https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2019_Vol3_Species_Article17.pdf