



Consenting Unit,
MARA,
Newtown Road,
Wexford.

06/03/2024

Re: Maritime Usage Licence (MUL) application for Installation and maintenance of the 2Africa fibre optic subsea telecoms cable.

Applicant: Apollo Submarine Cable System Limited

Site Location: The cable crosses Ireland's Maritime Area from circa 130km to circa 360km off the south west coast of Ireland. The cable does not land in the state.

Supporting information considered:

- Completed Application Form
- AIMU Report

Project Overview and Background

The proposed fibre optic subsea telecoms cable will interconnect the UK, Europe, Asia, and Africa. The purpose of the submarine cable project is stated as to significantly increase the capacity, quality and availability of internet connectivity between Africa and the rest of the world. The applicants state that this is of particular significance for a continent that has historically been behind the global average in internet penetration. It is further stated that this will help African leaders to implement their 2030 visions and to meet many of the Sustainable Development Goal challenges related to or depending on internet connectivity. Alcatel Submarine Networks (ASN) have been contracted by the 2Africa Consortium to engineer, manufacture and install the cable system, which is expected to be ready for service in 2024. The 2Africa cable installation within Ireland's Maritime Area is scheduled for Q2 2024.

The subsea fibre optic cable installed for the 2Africa system will be the OALC4 cable, developed and manufactured by ASN with five protection types; 17mm dia. Light Weight for surface laid on smooth sea bed depth >1000m to 8000m depth, 23mm dia. Light Weight Protected for surfaced laid on steep/rough sea bed <1000m to 7000m depth, 28mm dia. Single Armour for full burial >20m to 2000m depth, 37.5mm dia. Double Armour Beach to 20m depth/Poor Burial/Crossings >500m and 50mm dia. Double Armour Heavy 0m to 500m surface laid. All components encased within the cable package are stated as being environmentally benign and stable. The applicant states there is no possibility of any chemical leaching or similar.

In Ireland's Maritime Area the water depth along the cable varies from a minimum of circa 65m to circa 4000m. Due to the stepped nature of the EEZ between Ireland and the UK the cable enters Ireland's Maritime Area twice and leaves twice before leaving for a third and final time.

The 2Africa cable system will be predominantly buried by cable plough in water depths up to 1,470 metres, at which point, ploughing operations will cease. The applicant states that the main rationale for plough burial is to protect the cable against external aggression; in this case demersal fishing activities i.e.

bottom trawling. Without such protection, the cable could become easily damaged by fishing activities, requiring unnecessary, costly and time-consuming cable repairs. They state that cable protection/burial by plough has proven to be a very effective protection methodology, with a very low seabed surface area affected and is extensively utilised worldwide. At crossings with other in-service cables, the plough is recovered and the short unburied section is buried by means of a water jetting remotely operated vehicle. In some limited areas within Ireland's Maritime Area, cable burial cannot be conducted due to unavoidable hard bottom conditions or areas of steep seabed slopes, high relief, or similar.

The geophysical and geotechnical surveys for this section of the proposed 2Africa subsea cable system were conducted by Fugro between December 2020 and March 2021 prior to the commencement of the MAP Act and beyond the 12nm limit of foreshore. This data informed further route engineering within the survey swathe to find the optimum route for the cable, avoiding known hazards and rough topography. The route was subsequently revised to present the optimum route based on the survey data.

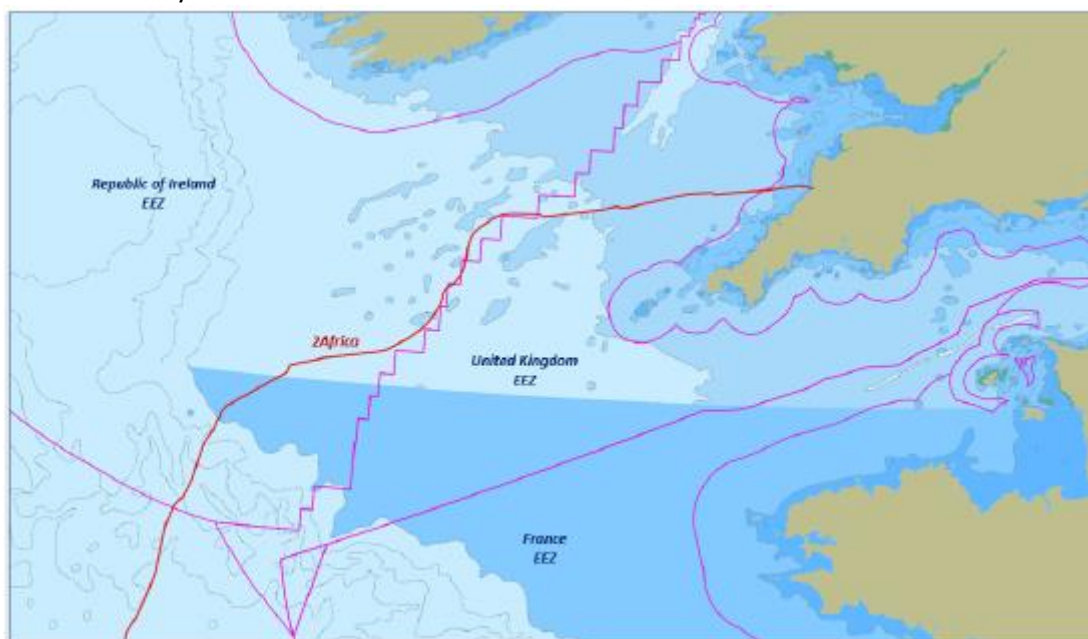


Figure 1, Cable Route through Ireland's EEZ (source: Altmar AIMU 15/12/2023)

Pre-Lay Grapnel Run (PLGR) Operations

Prior to the cable installation and burial activities, a 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.

Main Lay

Within Ireland's Maritime Area the 2Africa cable system will be installed using a dedicated cable lay vessel. Where the cable is to be buried, a plough will be used to a target burial depth of 2m depending on seabed conditions.

Post Lay Inspection & Burial Operations

Post Lay Inspection and Burial operations may be carried out in some areas along the route. A visual inspection will be dependent on visibility at the time of the inspection, alternatively the inspection will use cable tracking sensors and forward-facing sonar to determine the burial.

Post lay burial operations will be carried out in plough burial areas at several locations:

- At in-service cable crossings, there are 6 in-service cable crossings within the Ireland's Maritime Area);
- Initial, intermediate and final splices;
- Unplanned plough skips; and
- Areas where seabed slopes are not suited for ploughing and jetting burial is viable

A water jetting remotely operated vehicle will be deployed to bury the cable in areas identified above.

Future Maintenance Activities

In the waters of Ireland's Maritime Area the 2Africa cable system may require repairs primarily due to external factors like fishing activities e.g. fishing gear strikes, and occasionally, product failures. The precise frequency of these repairs cannot be accurately anticipated. The location and extent of future repairs are impossible to predict **but is not expected to exceed five repairs** over the 25 year design life within Ireland's Maritime Area but is expected to be considerably fewer.

Decommissioning

The Applicants state that there is no definitive position on decommissioning of telecommunication submarine cables. UNEP-WCMC (United Nations Environment Program) document points out that the removal of submarine telecommunication cables should be evaluated on a case-by-case basis, as the procedures for withdrawal and some local conditions (soil type, crossing with other cables, etc.) can often have a greater environmental impact than the procedures related to the installation itself. In some cases, cables that have a depleted business life may serve research and teaching purposes, which in other words is an extension of their "useful life", but then under the responsibility of another owner/manager.

The system has a system design life of 25 years however cable system can operate long after this period, and its deactivation can only be performed by the shutdown of the electrical/electronic system and disabling the transmission of information. There are currently no plans to recover the cable as part of decommissioning and as stated previously the removal of the cable upon decommissioning should be re-evaluated in accordance with best practice at that time. Accordingly I propose a condition to allow for decommissioning up to and including the full removal of the cable and rehabilitation of the maritime area.

Marine Advisor Review and Assessment

Appropriate Consent Instrument

Under the Foreshore Act the Minister for Agriculture, Food and the Marine (MAFM) retains the function for authorisations in relation to a fishery harbour centre, an activity which is wholly or primarily for the use, development or support of aquaculture, or an activity which is wholly or primarily for the use, development or support of sea-fishing including the processing and sale of sea-fish and manufacture of products derived from sea-fish.

As proposed cable laying and maintenance is not in relation to a retained function of the MAFM the appropriate instrument for authorisation is the MAP Act. More specifically, item 13 of Schedule 7 of the MAP Act 2021 includes "the laying or installation of telecommunications cables or ducting by or between coastal States where such cables or ducting pass through the exclusive economic zone or the continental shelf but do not land in the State"

The proposed cable laying and maintenance, the subject of this application, therefore requires a Maritime Usage Licence (Schedule 7.13 Maritime Usage) as applied for by the applicant.

Site Inspection, Existing Use and Activities

As the proposed cable route is in the far offshore Maritime Area and the cable does not land in the state, I did not carry out an inspection of the site. As this proposed maritime usage has no landfall element, and considering the nature of the works and its location, there will no impact on any nearshore intertidal amenity area.

Site Consent and Application History

The proposed licence area does not overlap with any existing or proposed Maritime Area Consents, Maritime Usage Licences or foreshore consents. The Applicant states that there will be 6 cable crossings with cables laid before the establishment of MARA and the commencement of the MAP Act. The applicants have stated that ICPC Recommendation, Recommendation No. 3, Criteria to be applied to Proposed Crossings between Submarine Telecommunications Cables and Pipelines/Power Cables and implemented and adhered for all cable crossings and Recommendation No. 2

Recommended Routing and Coordinating Criteria for Submarine Telecommunications Cables in Proximity to Other Such Cables will be implemented. Compliance with ICPC recommendations and any current or future cable crossing agreements is solely the responsibility of the cable owners or operators. No part of the maritime area the subject of his licence is for the exclusive use of the holder.

All maritime area within the 12NM limit is presumed state owned unless proven otherwise. This licence area is entirely outside the 12NM limit and within Ireland's EEZ and continental shelf. Therefore the maritime area the subject of this application cannot be privately owned. The proposed cable does not conflict any existing overlapping and adjacent consents or applications nor could it significantly injure the public use of, access to and enjoyment of the maritime area in question.

For a cable the licence area is a 10m wide corridor centred on the cable. The total size of the maritime area, which is the subject of the application, is **387.6 ha**.

Coastal and Seabed Morphology and Sediment Transport Processes

During plough burial works seabed sediment will be disturbed within a 0.3m wide and 2.0m below sea floor trench during installation of the cable and will be immediately back-filled. Seabed sediments will undergo minor disturbance during surface lay works. Given the nature of the proposed works, and the limited range of potential disturbance impacts on seabed sedimentation, even in the absence of mitigation measures, the project will have no significant impact on Coastal and Seabed Morphology or Sediment Transport Processes.

Sea Fishing and Aquaculture

Subject to the comments of the SFPA and relevant public submissions, it is my opinion that,

- Considering the scale and nature of the proposed maritime usage, there is no potential for significant negative impacts on the spawning and nursery grounds of commercial fish and shellfish species during the laying, maintenance or operation of the cable.
- During the laying and maintenance operations there is limited potential for impact upon legitimate fishers operating in the vicinity of the laying and maintenance locations, the licensee should engage with fishers to ensure appropriate mitigation is in place and that clear and comprehensive notification/communication is provided prior to any works proceeding. To mitigate any potential to impact on fishers the applicant should employ a Fisheries Liaison Officer (FLO) for the cable laying and maintenance operations.
- There are no aquaculture sites in proximity to the proposed cable areas and therefore no impact is envisaged.

Navigation

The applicants state the proposed 2Africa cable route has been designed to avoid navigational features such as anchorages, navigational aids, restricted areas, dump sites etc. Also the route is located in an area of low navigational and vessel activity. The vessel will be moving at slow speeds and will comply with the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs). To mitigate any risk the licensee shall arrange for the publication of a Marine Notice through the Maritime Safety Policy Division of the MSO.

Cultural Heritage

The National Monuments Service (NMS) is tasked with addressing the protection and preservation of our underwater cultural heritage and in this regard the Underwater Archaeology Unit (UAU) of NMS has a wide remit, including quantification of the record, research, underwater survey, excavation and regulation. The UAU also assesses potential development impacts on underwater archaeology by making recommendations to the relevant planning authorities and other regulatory bodies on developments which have the potential to impact on underwater archaeology.

The cable laying and maintenance operations have a limited potential to impact underwater archaeology. To mitigate any risk the licensee shall, in advance of operations, consult and comply with the requirements of the Underwater Archaeology Unit of the National Monuments Service.

Water Framework Directive (WFD)

Section 121 Part 2b (ii) of the MAP Act requires MARA to have regard to the WFD when considering a licence application. Council Directive 2000/60/EC (the WFD) on establishing a framework for community action in the field of water policy was adopted by all member states in October 2000. Since 2000, the WFD has been the main law for water protection in Europe. It applies to inland, transitional and coastal surface waters out to 1nm as well as groundwater. It ensures an integrated approach to water management, respecting the integrity of whole ecosystems, including by regulating individual pollutants and setting corresponding regulatory standards. It is based on a river basin district approach to make sure that neighbouring countries cooperate to manage the rivers and other bodies of water they share.

The key objectives of the WFD are set out in Article 4. It requires Member States to use their River Basin Management Plans and Programmes of Measures to protect and, where necessary, restore water bodies in order to reach good status, and to prevent deterioration. Good status means both good chemical and good ecological status. The WFD is the primary legislation, which is supported by the Groundwater Directive, and other directives targeting the quality of surface waters.

The WFD applies to inland, transitional and coastal surface waters out to 1nm. As the proposed cable laying and maintenance locations are offshore and so any potential impacts well beyond 1nm from the shore there is no risk of these works impacting the chemical or ecological status of inland, transitional, coastal surface waters and ground waters.

National Marine Planning Framework (NMPF)

The NMPF is a national plan for Ireland's maritime area. It sets out, over a 20-year horizon, how we want to use, protect and enjoy our marine area. The NMPF sits at the top of the hierarchy of plans and sectoral policies for the marine area and provides a coherent framework in which those sectoral policies and objectives can be realised. All decisions on individual applications determined under the MAP Act, must secure and be consistent with the objectives of the plan, similar to the way that terrestrial plans form part of the decision-making tool-kit in the on-land planning process. NMPF objectives are supported by specific policies that articulate factors that can form part of objective consideration.

Although the proposed project is not making landfall in Ireland, Ireland will be connected to the 2Africa cable via the UK and Irish Sea cables, providing Ireland with high capacity international connectivity.

Having reviewed and assessed the information on file for this application to lay and maintain a telecommunications cable against the objectives of the NMPF, I am satisfied the proposed works are consistent with the objectives of the NMPF. In particular the proposed usage is consistent with Telecommunications Policy 1 of the NMPF to support projects that guarantee existing and future international telecommunications connectivity.

Licence Term

The cable has a design life of 25 years from an engineering and estate management perspective I have no objection to the granting of a 25 year licence.

Assessment & Conclusion

The maritime area which is the subject of this application is not privately owned, there are no conflicts/overlaps with existing leases, licences, MACs, MULs or applications on hand. The works if completed as proposed, in my opinion, will not have significant adverse impacts on the public use of, access to and enjoyment of the maritime area, to navigation or to sea fishing or aquaculture. The works are in alignment with Telecommunications Policy 1 of the NMPF.

Recommendation

I have no objection to the granting of a Maritime Usage Licence under Section 119 of the MAP Act for this application subject to the following conditions;

1. 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.
Reason: In the interest of clarity.
2. The Holder shall notify the Grantor 14 days prior to the commencement of the Permitted maritime usage or any subsequent part or phase of the Permitted maritime usage. This notification shall include an up to date Programme of Works for the completion of the Permitted maritime usage.
Reason: To ensure the orderly undertaking of the proposed maritime usage.
3. Prior to the commencement of the Permitted maritime usage the Holder shall consult and comply with the requirements of the Underwater Archaeology Unit of the Department of Housing Local Government and Heritage. National Monuments Service, G37, Custom House, Custom House Quay, Dublin 1, D01 W6X0
Reason: To ensure the continued preservation of objects of archaeological interest.
4. Prior to the commencement of the Permitted maritime usage the Holder shall, through consultation and agreement with the Department of Transport, Marine Survey Office and Commissioners of Irish Lights, arrange for the publication of a Marine Notice through the Maritime Safety Policy Division. Navtext and radio broadcast warnings frequency to be agreed with the Irish Coast Guard.
Reason: In the interest of navigational safety.
5. Prior to the commencement of the Permitted maritime usage, the Holder shall employ a Fisheries Liaison Officer (FLO) to consult with relevant fishers and fisher's representative organisations in order that interactions with ongoing fishing activities in the area are minimised during the course of the Permitted maritime usage.
Reason: In the interest of navigational safety, to minimise disruption of other legitimate users of the maritime area and to ensure the orderly undertaking of the proposed maritime usage.
6. The licence shall be for a duration of 25 years from the Commencement Date.
Reason: To ensure the orderly administration of licenced usages in the maritime area.
7. Prior to the decommissioning of the cable the Holder shall submit a Decommissioning and Rehabilitation Plan, which may include the full removal of the cable and rehabilitation of maritime area as appropriate, for the approval of MARA.
Reason: To ensure the orderly administration of the maritime area.
8. The Holder shall ensure the information regarding the final as laid location and depth of the submarine cable is submitted to the United Kingdom Hydrographic Office (UKHO) for inclusion on relevant navigation charts.
Reason: In the interest of navigational safety and the orderly administration of the maritime area.

9. On completion of the works, the Holder shall submit to MARA a statement from a suitable qualified Chartered Engineer confirming that works are completed in accordance with the documents submitted together with a drawing and a route position list showing the “as-laid location” for the submarine cable.

Reason: In the interest of orderly administration of the maritime area.

10. The Licensee shall ensure that contractors, and their subcontractors, are made aware of all conditions and project specific requirements and they are required to have briefings on these to ensure all parties are fully aware of these requirements.

Reason: In the interest of orderly administration of the maritime area.



[Redacted] M.Eng. M.I.E.I.
Senior Marine Advisor