DeepSea Fibre Networks Ltd. for a marine survey and site investigation works at Ballyloughane Strand, Galway (FS007016)

Contents:

- **Department of Culture Heritage and the Gaeltacht (DCHG)**
- **Marine Institute**
- **Department of Agriculture, Food and the Marine (DAFM)**
- **Marine Survey Office**
- **Water and Marine Engineer**
- **Inland Fisheries Ireland (IFI)**

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Please find the heritage recommendations of the **Department of Culture, Heritage, and the Gaeltacht** for the above-mentioned application.

Nature Conservation
The proposed cable lay between Galway and Spain has been evaluated by a Natura Impact Statement.

The conclusion of the Natura Impact Statement document is that the proposed works are unlikely to pose a significant likely risk to nature conservation interests in the vicinity. The Department of Culture, Heritage, and the Gaeltacht concur with this conclusion provided the stated mitigation is undertaken.

Underwater Archaeology
It is noted that the proposed investigations are within an area of underwater archaeological potential. The Wreck Inventory of Ireland Database lists numerous wrecks for the cable route area, which are subject to statutory protection under section 3 of the 1987 National Monuments (Amendment) Act. Given the location of the proposed investigations it is possible that underwater archaeology may be impacted by the investigations. It is therefore recommended that the following be added as conditions on any foreshore licence that may be granted for the proposed development.

1. It is recommended that all known wrecks and archaeological sites be avoided by the proposed works.
2. It is recommended that the proposed geophysical surveys be carried out in advance of any site investigation studies. The geophysical survey should include a sidescan sonar and magnetometer survey. It is recommended that the proposed geophysical surveys be licenced under the National Monuments Acts 1930-2004. The geophysical data for all proposed site investigation locations (i.e. grab sampling, gravity cores and site investigations for the landfall section) shall be assessed by a suitably qualified archaeologist to ensure that the proposed works do not negatively impact on locations where there is known or potential archaeology and to ensure no samples or cores are taken from an area where a wreck site is located.
3. A report summarising the assessment of the geophysical data should be forwarded to this office for review prior to the geotechnical works taking place. Where archaeological material/features are shown to be present, preservation in situ, avoidance, preservation by record (archaeological excavation) or archaeological monitoring may be required. The applicant shall be prepared to be advised by the Department of Culture, Heritage, and the Gaeltacht.
4. Archaeological analysis of the geophysical and bathymetric pre installation surveys should be undertaken to both confirm the locations of the wreck sites within the survey corridor and also to identify any potential unrecorded seabed and sub seabed maritime archaeological features. Where the location of the wreck site directly on the cable route is confirmed the cable should be re-routed to avoid them.
5. The proposed geophysical surveys and dive surveys (i.e. diver swim survey and dive investigations of potential archaeological anomalies) should be licenced under the National Monuments Acts 1930-2014. The dive survey should be accompanied by a hand-held metal detection survey which should also be licenced under the National Monuments Acts 1930-2014.
6. It is recommended that Archaeological Monitoring, as described below, be carried out of all proposed seabed disturbance works to take place as part of this development including the bar probes, trial pits, gravity cores, grab samples and CPT. The site investigation works should avoid locations of known wreck sites.

Archaeological Monitoring shall consist of the following:

- In order to ensure the preservation of potential archaeological sites, wrecks and features the applicant is required to engage the services of a suitably qualified underwater archaeologist to monitor all disturbance works associated with the development. The archaeological monitoring shall be licensed under the National Monuments Acts 1930-2004.
- A detailed method statement shall accompany the licence application and shall include details on the proposed works, duration of works; archaeological monitoring team proposed and a find's retrieval strategy.
- Should archaeological material be found during the course of monitoring, the archaeologist shall have the work in that area suspended, pending a decision as to how best to resolve the archaeology. The applicant shall be prepared to be advised by the Department of Culture, Heritage and the Gaeltacht with regard to any necessary mitigating action (e.g. avoidance, preservation in situ or excavation). The applicant shall facilitate the archaeologist in recording any material found.
- The Department of Culture, Heritage and the Gaeltacht shall be furnished with a report describing the results of the monitoring.

It should be borne in mind, that if significant archaeological remains are found, further archaeological mitigation might be required.

Marine Institute comments on the foreshore licence application by DeepSea Fibre Networks Ltd. for a marine survey and site investigation works at Ballyloughane Strand, Galway (FS007016)

DeepSea Fibre Networks Ltd has submitted an application to for a Foreshore Licence to facilitate a geophysical survey and site investigations works in Galway Bay. The survey and site investigation works are part of a project involving the possible future installation of a subsea fibre optic cable system (IRIS) extending from Iceland to Ireland with landfall at Ballyloughane Strand in Galway.

The location of the proposed survey and site investigations works on the foreshore are shown in the following drawings submitted by the applicant:

- Drawing No. 1334-A-101, Rev 01, "Foreshore Licence Map 1 Galway Bay Ref:FS007016", dated 22/10/2019

- Drawing No. 1334-A-102, Rev 01, "Foreshore Licence Map 2 Route to the 12 Mile Limit Ref:FS007016" dated 20/10/2019

- Drawing No. 1334-A-103, Rev 01,"Site Location Map Landfall at Ballyloughane Ref:FS007016", dated 22/10/2019

- Drawing No. 1334-A-104, Rev 01,"Site Location Map 2 Landfall at Ballyloughane Ref:FS007016", dated 22/10/2019

- Drawing No. 1334-A-105, Rev 01," Foreshore Licence Map Route to the 12 Mile Limit Ref:FS007016" dated 18/12/2019

The proposed geophysical survey will include collection of bathymetric, side scan sonar, sub-bottom profiler and magnetometer data along the survey route.

Site investigations at Ballyloughane Strand will include the following;

- 3 Trial Pits at 50m centres. The target depth for the pits is 2.5m. The pits will be excavated, logged, photographed and backfilled, by JCB, in a single intertidal period of 1 hour.

- A total of 24 bar probes on the beach and a further 20 bar probes from the Low Water Line to the 3m water depth contour.

- The area extending seaward from the 3m water depth contour and inshore of the safe working draft limits of the primary survey vessel will surveyed with a small craft using Multibeam Echosounder, sidescan sonar and sub-bottom profile equipment

Additionally it is intended to collect a total of 6 sediment grab samples from the 3m contour to the 15m contour and total of 45 gravity cores or Cone Penetration tests will be collected from the 15m contour to the 12 nautical mile limit.

It is also intended to carry out a drop down underwater video survey along a number of transects within the boundaries of the Galway Bay SAC to map the distribution and density of the sensitive Sea Pen Virgularia mirabilis and within the Inishmore Island SAC within which reef outcrops are a feature of interest.

Specifications for the survey and associated site investigations are set in the "Planning Report" document, dated October 2019, submitted by the applicant.

It is anticipated that the proposed survey and site investigation works would be completed within 1 month.

On the basis of the information provided by the applicant the Marine Institute is of the view that, considering the nature, scale, location and duration of the proposed survey and site investigation works, impacts on the marine environment are not likely to be significant.

There are no licenced aquaculture sites along, or adjacent to, the proposed survey route and site investigation works and the Marine Institute is of the view that there would be no impact on aquaculture activities as a result of the proposed works.

Pot fisheries for shrimp, lobster and crab takes place in inner Galway Bay (inside Black Head) as well as in the South Sound and along the Clare Coast, in the vicinity of the proposed survey route. There may be short term disruption to these fisheries during the survey but overall impacts are not likely to be significant. It is noted that the applicant has stated that "it is proposed to appoint a Fisheries Liaison Officer for the inshore and offshore sections of the survey" and the Marine Institute recommends that the appointment of a Fisheries Liaison Officer should be condition of any licence that may be granted.

The Marine Institute has no objections to a licence being granted.

It is recommended that the following Conditions should be attached to any licence that may be granted

1. The Licensee shall use that part of the Foreshore the subject matter of this licence for the purposes as outlined in the application and for no other purposes whatsoever.

2. The Licensee shall appoint a Fisheries Liaison Officer who shall consult with the SFPA and relevant fishermen's groups in order that appropriate actions can be taken to avoid or minimize any interactions with ongoing fishing activities in the area during the course of the survey and site investigation works on the Foreshore.

3. On completion of the works at Ballyloughane Strand the licensee shall ensure that all equipment and materials are removed from the foreshore and the foreshore is reinstated to its original condition.

DeepSea Fibre Networks Ltd. for a marine survey and site investigation works at Ballyloughane Strand, Galway (FS007016)

The Department and Agriculture, Food and the Marine has reviewed the application above.

The following conditions are recommended for inclusion in any licence:

1. The Licensee shall use that part of the Foreshore the subject matter of this licence for the purposes as outlined in the application and for no other purposes whatsoever.
2. The Licensee shall appoint a Fisheries Liaison Officer who shall consult with the SFPA and relevant fishermen's groups in order that appropriate actions can be taken to avoid or minimize any interactions with ongoing fishing activities in the area during the course of the survey and site investigation works on the Foreshore.
3. Sediment disturbed in the cable laying process may have some impact on aquaculture. In that regard it would be preferable for the work to be done on an ebbing tide.

The Marine Survey Office has reviewed the above application and wish to make the following comments.

In addition to the Marine notice a port marine notice to the same effect should be issued by the Galway Harbour Authority and the Aran Islands Harbour Authority.

The applicant is required to consult with local harbour authorities, all local passenger vessel, cargo and fishing co-operative operators, operating within, to and from Galway Bay. The applicant is required to provide up to date information on survey activities to the above parties.

DeepSea Fibre Networks Ltd. for a marine survey and site investigation works at Ballyloughane Strand, Galway (FS007016)

WATER AND MARINE ENGINEERING REPORT.

RE: FORESHORE LICENCE APPLICATION BY DEEPSEA FIBRE NETWORKS LTD – CABLE ROUTE SURVEY AND SITE INVESTIGATION FROM BALLYLOUGHANE STRAND, RENMORE, CO. GALWAY

APPLICATION BACKGROUND

The proposed project relates to a new sub-sea telecoms cable system, IRIS, linking Iceland to Ireland from landfall on the Reykjanes Peninsula to landfall at Ballyloughane Strand, Renmore, Co. Galway on the west coast of Ireland. This particular application relates to a Foreshore Licence for Marine Survey and Site Investigations for route options traversing Galway Bay to the North or South of the Aran Islands. The works will be carried out predominantly by seaborne electronic equipment (geophysical survey) with some selective sampling of the seabed (geotechnical survey). Once the results of the survey are obtained and analysed a preferred route corridor will be determined, design and method statements will be developed and a final Route Position List (RPL) will be defined as part of a further submission for a Foreshore Licence for installation works.

The applicant states that Farice ehf was founded in November 2002 by a number telecommunications companies in Iceland and the Faroe Islands as well as the Icelandic State in order to build and operate the FARICE-1 submarine cable that was put into service in January 2004. The second cable, DANICE, was put into service in September 2009. The company is the now main provider of wholesale capacity in and out of Iceland. The Icelandic state has 100% of the shares under its ownership.

BRIEF DESCRIPTION

The principal objective of the Marine Survey & Site Investigations is to ascertain a feasible and safe route for cable system design, deployment, survivability and subsequent maintenance with due regard for environmental and ecological considerations. The survey will also enable decisions to be made on cable armouring and burial. The survey will identify all route features, obstacles and cable hazards and provide detailed information to support cable route and installation engineering. The site investigations will provide “ground-truthing” of the seabed along the route. This licence application is solely for the purposes of the completion of the surveys. The Type of surveys proposed include:

- Geophysical Survey
- Geotechnical Survey

The Marine Survey and Site Investigation Report which accompanies the application details the nature and extent of the survey works. The works are proposed to take up one month subject ot favourable weather.

ENVIRONMENT

The proposed development lies within the Inner Galway Bay SPA and is within 15km of an number of other Designated Natura 2000 sites. Consequently as part of the duties as a consent authority, DHPLG through the MLVC must complete the Natura 2000 requirements in accordance Birds and Habitats Regulations 2011. To facilitate this process, the applicant has submitted a Natura Impact Statement and an Ecological Impact Assessment.

NAVIGATION

When the survey works/investigations are scheduled the applicant must arrange for the publication of Local Marine Notices giving a general description of the operations and approximate dates for commencement and completion. The Mariner Notice will be prepared to ensure that other foreshore users are made aware of the operations. All vessels taking part in the survey/investigation works must comply with full certification requirements. The survey work will be of a temporary nature, consequently the impact on marine traffic will be minimal and will be over a very limited period. The proposed works will cause minimal disruption to marine users.

LICENCE MAP

The location for all of the proposed survey works are shown on Drawing 1334-A-105 entitled "Foreshore Licence Map Rev 1" dated 18/12/2019 attached to the application. This map should be attached to any licence issued.

CONCLUSIONS/RECCOMENDATIONS

I have no objection to the granting of a Licence subject to the following conditions:

1 The Licensee shall notify this Department of the date of commencement of the Site Investigation/Survey operations at least 2 weeks prior to commencement.

2 All works must be completed in accordance with the drawings and documents submitted in support of the application.

3 During the course of the Site Investigation/Survey operations the Applicants shall ensure that;

(a) All necessary precautions are put in place to protect the public in accordance with relevant Health and Safety Legislation;

(b) Existing public access arrangements to the general foreshore area are not impeded by any vessels, plant or materials used in connection with the site investigations/surveys, and where relevant this access should be made safe and guaranteed by the provision of appropriate

signage/notices/barriers etc. to the satisfaction of the Department of Housing Planning and Local Government;

(c) Procedures are adopted to ensure that the site investigations/survey operations are not injurious to fishing, navigation, adjacent lands or the public interest

4 All vessels/floating plant shall have appropriate certification from the Marine Survey Office.

5 On completion of the Site Investigation/Surveys the Licensee should ensure that all equipment and materials are removed and the foreshore is reinstated to its original condition, to the satisfaction of the Department of Housing, Planning and Local Government.

6 All relevant Site Investigations and Marine Surveys to comply with the NPWS (2014) "Guidance to Manage the risk Marine Mammals from Man-made Sound sources in Irish Waters" including the employment of a Marine Mammal Observer as appropriate.

DeepSea Fibre Networks Ltd. for a marine survey and site investigation works at Ballyloughane Strand, Galway (FS007016)

MARINE LICENCE VETTING COMMITTEE:

Overview:

There are three components to this application:

- Pre-installation survey
- Localised site investigations
- Installation of fibre optic cable

Ecological impact report does not appear to cover the issues of pre-installation surveying. Gives good coverage to the ecological entities and to the cable laying route.

The Natura 2000 report indicates that pre-installation survey will include bathymetry, side-scan sonar, sub-bottom profiling and magnetometry.

IFI comment:

IFI notes the comprehensive coverage in regard to the localised site investigations at the cable landing site and to the marine cable laying.

IFI notes that some of the proposed survey instruments, for the pre-installation survey, emit sound levels in excess of 200dB into the aquatic environment. There do not appear to be any mitigation measures in regard to sound generation during this particular survey process. The cable route assessment process does not appear to be covered to any degree. In contrast, the cable laying process is well-described and is as minimally invasive as seems feasible.

IFI notes the proposed method of horizontal directional drilling to bring the cable under the foreshore. Data is presented in regard to the noise generated by this process. IFI notes that the examples given relate to sound dispersal in air. The sound levels dispersed into the immediate foreshore area may be more relevant to aquatic organisms.

IFI would propose that any foreshore licence would include mitigation measures in regard to noise in the aquatic environment. No mitigations appear to be included in documentation submitted. Mitigations should include:

- Specific soft-start procedures (to comply with the "Code of Practice for the Protection of Marine Mammals during Acoustic Seafloor Surveys in Irish Waters") will be developed and incorporated in the project execution plan before mobilisation.
- The duration of noise-generating surveys will be reduced to the minimum necessary to collect results of sufficient quality.
- It is proposed to contact the Sea Fisheries Protection Agency (SFPA) to seek advice regarding the timing of survey works to avoid clashing with spawning periods of fish

in the area. This will reduce any potential for noise damage to larval and juvenile life stages of fish when they are more susceptible to noise damage than adults.

A number of similar projects, in areas where commercial fishing is actively in operation, have appointed a Fisheries Liaison Officer for the inshore and offshore sections of the survey. The appointment of a Fisheries Liaison Officer would have the purpose of keeping commercial fishermen informed of the survey works including time lines, dates of sampling and locations of sampling vessels. IFI would recommend that Foreshore Unit consider the inclusion of a Fisheries Liaison Officer, funded by the applicant for the project duration, as a licence condition

The opinion of the SFPA in regard to timing of the survey is critical from the spawning/larval life stages of commercially-important fish species using the area.

IFI would point out that the timing of proposed geophysical surveys must also take into account the potential for impact on migratory fish species, particularly Annex II Habitats Directive species relevant to IFI. This issue has been already flagged by IFI in earlier correspondence from Mr David Harrington (email of 3.5.2018) to Altemara:

As previously discussed during our telecom, the proposed cable laying timeline (July 2019) will coincide with the main salmon run returning through Galway Bay into the River Corrib catchment for the purposes of spawning.

I am aware that Dr William Roche has already advised that the salmon smolt run is from mid-April to the end of May (outside the timeline of the proposed cable laying works).

However, I note from your summary information that "there is no significant noise generation during ploughing operations. As the cable installation by plough is relatively slow it 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 ploughing and natural backfill activities". It is also noted that the cable laying operation from Ballyloughane Beach to the Aran Islands should only take approximately three days.

IFI will need to be notified at least one week before the cable lay from Ballyloughane Beach in order to monitor the operation to ensure there are no negative impacts on returning Salmon.

Any acoustic surveys associated with the site investigations (April 2019) will obviously require appropriate mitigation measures given the sensitivity of the habitat in question.

The opinion of the Sea Fisheries Protection Authority (SFPA) in regard to timing of the survey is critical from the spawning/larval life stages of commercially-important fish species using the area.

On a side note, I presume that the proposed extension of Galway Harbour has also been accounted for and will not affect the cable?

I look forward to reviewing a copy of the Foreshore Licence Application in due course.

IFI notes that, in similar such projects, the survey process for cable route, including geophysical etc. surveys, and the actual cable laying process are generally structured as two separate foreshore applications.

IFI would also point out the mitigation measures for marine mammals are not necessarily applicable to fish species. This is particularly the case in regard to use of MMOs, such measure being of no value to conservation of fish species.