

LICENCE UNDER SECTION 3(3) OF THE FORESHORE ACT, 1933

SITE INVESTIGATION LICENCE UNDER SECTION 3 OF THE FORESHORE ACT 1933

The Minister for Housing, Planning and Local Government, in exercise of the powers conferred on him by Section 3(3) of the Foreshore Act, 1933 (No. 12 of 1933) and in consideration of the licence fee in recognition of the rights and interests of the State in the foreshore concerned, hereby authorises Eirgrid Plc, The Oval, 160 Shelbourne Road, Ballsbridge, Dublin 4, D04 FW28 (hereinafter referred to as "the licensee"), to carry out geotechnical and environmental marine survey works on the foreshore along 2 No. routes off the south coast of Ireland with landfalls at Ballinawilling Strand, Redbarn Beach and Claycastle Beach, Co. Cork. The proposed survey works form part of those investigating the feasibility of installing a subsea power cable interconnector between Ireland and France, known as the Celtic Interconnector.

The Licence is granted on the condition that:

1. This Licence shall remain in force for the term of one (1) year from the date hereof except as may be hereinafter provided.
2. The Licensee shall use that part of the foreshore the subject area of this licence, for the purposes as outlined in the application and for no other purpose whatsoever.
3. The cable route survey works shall be carried out within the area delineated in red on Foreshore Licence Maps 1 - 3 certified May 9th 2018 annexed hereto (**Schedule 1**).
4. The cable route survey shall be conducted in accordance with the application submitted to, and approved by, the Minister.
5. The Licensee shall at all times during the continuance of this Licence ensure that the cable route survey works are conducted in a manner that is to the satisfaction of the Minister and that it will not be injurious to navigation, the adjacent lands or the public interest.
6. The Licensee shall ensure that the minimum area of foreshore necessary for the cable route survey works is utilised, so as to reduce the impact of the proposed works/activity.
7. The Licensee shall schedule the works so as to minimise disruption and inconvenience for other users of the foreshore.
8. The Licensee shall ensure that on completion of the cable route survey works all non- commercially-sensitive environmental data collected shall be provided to the Marine Institute, in a standard format to be specified by the Marine Institute and within a reasonable timeframe to be agreed with the Marine

Institute. The Marine Institute will, on request, make this data available to individuals and organizations, in line with its data policy.

9. The Licensee shall pay to the Minister the sum of _____ on the signing hereof.
10. The Licensee shall indemnify and keep indemnified the State and the Minister, their officers, agents and employees against all actions, loss, claims, damages, costs, expenses and demands arising in any manner whatsoever in connection with the said works or in the exercise of the permission hereby granted.
11. The Minister shall be at liberty at any time to terminate this Licence by giving to the Licensee notice in writing and upon determination of such notice the Licence and permission hereby granted shall be deemed to be revoked and withdrawn without any liability for the payment of compensation by the Minister to the Licensee.
12. The Licensee shall, if so required by the Minister after receipt of such notice, or on the termination of this Licence from any other cause, at its own expense remove any or all equipment in connection with the said works to the satisfaction of the Minister, and if the Licensee refuses or fails to do so the Minister may cause the said equipment to be removed and shall be entitled to be paid by and to recover from the Licensee as a civil debt due to the State, all costs and expenses incurred by him in connection with such removal.
13. In the event of the breach, non-performance or non-observance by the Licensee of any of the conditions herein contained the Minister may forthwith terminate this Licence without prior notice to the Licensee.
14. Any notice to be given by the Minister may be transmitted through the Post Office addressed to the Licensee at its last known address.
15. **Disclaimer and Waiver:**
 - a. The Licensee acknowledges, accepts and agrees that the grant of this licence does not give rise on the part of the Licensee to any expectation whatsoever for, right or entitlement to a grant of a foreshore lease or future licence to the Licensee by the Minister in respect of all, or any part of the licensed area (or any other area) for the benefit of the Licensee.
 - b. The Licensee further acknowledges, accepts and agrees that no such expectation on the part of the Licensee for, right or entitlement to the grant of a foreshore lease or future licence in respect of all, or any part of the licensed area, exists in, or arises from the granting of the licence, whether or not the licence itself is complied with by the Licensee during the term granted, or terminated by the Minister for any reason during its term, or surrendered, or otherwise terminated by the Licensee during the term granted.

- c. The Minister shall have no obligation, or duty of any nature or kind to the Licensee whatsoever, nor shall same exist or arise, or be deemed to exist or arise on the grant of the licence, or during the term of the licence, or on the termination of the licence, to grant or demise a foreshore lease or future licence to the Licensee in respect of all or any part of the licensed area (or any other area) under the applicable foreshore legislation in the State.
- d. In the event that any such right or expectation to a grant of a foreshore lease or future licence in respect of all, or any part of the licensed exists or arises as a result of the grant of the licence, which is denied by the Minister, the Licensee hereby fully waives, extinguishes and relinquishes any such right or entitlement to the grant of a foreshore lease or future licence to the Minister and surrenders any right to claim or seek any such grant.

And on specific condition that:-

16. During the course of the works in the intertidal area public access onto and along the adjacent foreshore shall be maintained.
17. No refuelling of equipment, machinery or plant shall take place on the foreshore.
18. No storage of machinery or plant shall take place on the foreshore.
19. The works shall be conducted in accordance with Attachment A: Schedule of Survey Works, Dated: December 20th 2017 (**Schedule 2**) and all documents submitted with the application.
20. Intertidal and near-shore works shall be conducted outside of the bathing season (June 1st to September 15th) and on weekdays only. If works are required within the Bathing Season or on weekends the Licensee is required to get the prior consent of Cork County Council to ensure no undue impact on beach users.
21. The Licensee shall notify the following Departments of Cork County Council in advance of the survey works: the East Cork Municipal District; Divisional Services South Cork (Beach Management) and Environment Department.
22. The Licensee shall notify the Department of Housing, Planning and Local Government at least 14 days in advance of the commencement of the works on the foreshore.
23. In addition to a Marine Notice, the Licensee shall forward a proposal of work to the Deputy Chief Surveyor of the Marine Survey Office which should include details of all vessels to be employed in the venture.
24. The Licensee shall ensure that all vessels/floating plant have appropriate certification from the Marine Survey Office.

25. The Licensee shall consult with the local Harbour Master prior to the commencement of any works.
26. The Licensee shall be fully compliant with the requirements set out in Section 4.3.4 of the NPWS (2014) "Guidance to Manage the Risk to Marine Mammals from Man-made Sound sources in Irish Waters". This document is available to download at: <http://www.npws.ie/marine/bestpracticeguidelines/>
27. The geotechnical investigation works on the intertidal foreshore shall be subject to full archaeological monitoring.
28. A suitably qualified and experienced archaeologist shall be engaged to carry out the monitoring.
29. An excavation licence shall be applied for from the Licensing Section, National Monuments Service, to cover the monitoring and a detailed method statement shall accompany the licence application.
30. No archaeological monitoring is required for the subtidal geotechnical investigation works as currently proposed, if the proposed locations for geotechnical investigation targets change so that they come within 30m of anomalies or wreck sites as identified, then archaeological monitoring shall be required as detailed at conditions 13,14 and 15 above.
31. In accordance with statutory obligations under the National Monuments Act 1930-2004 all discoveries that are cultural in nature or potential, including those of wrecks, shall be reported to the National Monuments Service or National Museum of Ireland within 4 days. A protocol for such reporting shall be put in place to satisfy this statutory requirement.
32. During the course of the works the Licensee shall comply with all relevant Health & Safety legislation.



Roger Harrington
Principal Officer

An officer authorised in this behalf by the said Minister
Dated this 17 day of May 2018

Schedule 1 – Foreshore Licence Maps 1 – 3

Schedule 1 – Schedule of Survey Works

ATTACHMENT A: SCHEDULE OF SURVEY WORKS



Schedule of Survey Works Geotechnical and Environmental Survey

Geotechnical Survey

A geotechnical sampling and testing programme will be undertaken along the cable route corridors in order to evaluate the nature and mechanical properties of the superficial seabed sediments and inter-tidal sediments.

Approximate locations of the proposed geotechnical sites have been provided in the Foreshore Licence Maps, please refer to Attachment C, however, the exact location of the geotechnical sampling sites within the survey corridors will be determined following the completion of the interpretation of the data from the completed geophysical marine survey (ref FS 006722). Please note that the locations of the proposed geotechnical sites are best estimates and may be subject to change based on the results of the geophysical survey.

a. Intertidal Survey (HWM to LWM)

i) Bore Holes / Trial Pits

Method: Depending upon requirement identified from interpretation of the geophysical data, approximately 9 bore holes and/or 9 trial pits will be drilled / dug in order to determine soil conditions in the intertidal zone. The maximum depth below surface for boreholes and trial pits will be up to 20 metres and 3 metres respectively. The trial pits will typically be 3m x 1m in size whilst bore hole will be approximately 10cm in diameter. The trial pits will be backfilled using only native material and the borehole will not be backfilled but instead will re-fill naturally.

The equipment to be used will include the following or similar;

- Bore hole – MI6 Massenza Drilling Rig / Pagani TG 63-200 Penetrometer
- Trial Pit - Backhoe loader, JCB 3CX or 4CX

The Backhoe loader and MI6 Massenza drilling rig are approximately 5.5m x 2.25m and 3m x 1m respectively. Both pieces of equipment would be driven onto beach via public access points. The drilling of boreholes may be complemented at certain locations by the Pagani TG 63-200 penetrometer which is approximately 2.3m x 1.1m and would also be driven onto beach via public access points.

The tidal range at each landfall location shall be used to plan operations in order that the investigations can be undertaken with the most suitable plant and equipment and extend outwards to join and overlap the Shallow Water Survey at approximately 10m water depth.

The intertidal range is considerable and will therefore require careful consideration in terms of deployment and setting-up of the survey. Careful consideration will also have to be given to managing the time available to perform the services. The approximate locations of trial pits and bore holes have been shown on the Foreshore Licence Maps 1 and 2, please refer to Attachment C.

Survey Parameters:	Spacing:	100m (nominal)
	No.:	9 boreholes / 9 trial pits
	Depth:	20m / 3m

ii) **Thermal Resistivity**

Field Testing – Method: Thermal conductivity testing will be performed on soil samples recovered from the land/intertidal samples at 1m intervals from the surface to 4m below ground level, or otherwise directed. Samples will be tested at the natural moisture content.

Laboratory testing – Thermal conductivity tests will be performed on soil samples from surface to 4m below ground level to assess the suitability of the soil for backfilling and landfall trench. At each location it is envisaged 5 tests will be performed.

Location: Intertidal component of intertidal and shallow water survey area of Foreshore Licence Area 1 and 2 (as shown on Foreshore Licence Map 1 and 2 in Attachment C).

b. **Shallow Water Survey Area (LWM to 10m LAT)**

i) **Vibrocore**

Method: Vibrocores will be used to understand the sedimentary environment between LWM to 10m LAT. The base case is for 7 vibrocores to be acquired with a distance of 1,000m or so between each sample. This base case will need to be reviewed based on seismic interpretation of soil conditions. The standard vibrocore shall have a 5m depth capability and a 75mm nominal core diameter.

Survey Parameters:

Interval:	1,000m
Sites:	7
Depth:	5m

ii) **Cone Penetrometer Testing (CPT)**

Method: CPTs will be used to understand the sedimentary environment between LWM to 10m LAT. The base case is for 7 CPTs to be acquired with a distance of 1,000m or so between each sample. This base case will need to be reviewed based on seismic interpretation of soil conditions. The penetrometer will have a maximum depth penetration of 5m below seabed.

Survey Parameters:

Interval:	1,000m
Sites:	7
Depth:	5m

iii) **Rock Coring (Optional)**

In the event of a failure to achieve sample recovery using the CPT and/or Vibrocore methodology at the planned shallow water survey locations, a rock corer may be deployed in order to obtain samples of the required length and quality at or in close proximity to the site of any failed sampling.

Method: In the shallow water survey area, rock coring may be performed using a drilling rig deployed upon a Jack up barge which would typically have an operating water depth limit of 16m.

iv) **Thermal Resistivity Testing** – Thermal resistance/conductivity testing is required upon soil horizons identified during the geotechnical shallow water survey.

c. **Offshore Survey Area (10m LAT to 12nm Limit)**

i) **Vibrocore**

Method: The base case is for vibrocoreing to be conducted every 1,500m or so giving a total requirement of 39 vibrocores in Irish waters. This will be confirmed based upon the interpretations of soil conditions from seismic operations conducted during the geophysical survey. The decision to undertake vibrocoreing and CPTs at the same or separate locations will also be based on the findings from seismic operations conducted during the geophysical survey.

Soundings will be acquired across the offshore survey area to provide full seabed bathymetric coverage.

Survey Parameters:

Interval:	1,500m
Sites:	39
Depth:	5m

ii) **Cone Penetrometer Testing (CPT)**

Method: The base case is for CPTs to be conducted every 1,500m or so giving a total requirement of 39 CPTs in Irish waters. This will be confirmed based upon the interpretations of soil conditions from seismic operations conducted during the geophysical survey. The decision to undertake vibrocoreing and CPTs at the same or separate locations will also be based on the findings from seismic operations conducted during the geophysical survey.

Survey Parameters:

Interval:	1,500m
Sites:	39
Depth:	5m

iii) Rock Coring (Option)

In the event of a failure to achieve sample recovery using the CPT and/or Vibrocore methodology at the planned offshore survey locations, a rock corer may be deployed in order to obtain samples of the required length and quality at or in close proximity to the site of any failed sampling.

Method: In the offshore survey area any rock coring may be performed using a compensated drilling rig operating from a dedicated vessel or by way of a seabed drilling rig.

iv) Thermal Resistivity Testing – Thermal resistance/conductivity testing is required upon soil horizons identified during the geotechnical offshore survey.

v) Ground-Truthing

Should on-site interpretation of the side scan sonar data indicate anomalous areas of seabed that require further qualification, the area shall be ground-truthed. Ground-truthing will be undertaken using still photography, or grab sampling if the former technique doesn't provide a clear image. If required, the number of grab samples is likely to be low and typically involves a sample of 10 litres or less, taken from the seabed.

Environmental Survey

The environmental survey will be used to map the distribution and extent of marine benthic habitats from the interpretation of the geophysical survey for the cable route corridors. This will comprise a benthic sampling programme and video or still photographs based upon interpretation of the geophysical data. The sampling locations will be determined based on the physical characteristics of the seabed, based on interpretation of the results of the geophysical survey.

Additional sediment samples may be acquired for later chemical analysis to determine the concentration of potential pollutants.

The programme base scope is based upon site intervals given below, although will be dependent upon the diversity of benthic habitats.

a. Land/Intertidal Survey (HWM to LWM)

Method: Beach inspection and survey at each shore in Ireland.

b. Shallow Water Survey Area (LWM to 10m LAT)

Method: Use of grab sampling and still or video camera. Grab samples will be collected as required for aiding side scan sonar interpretation.

Sampling Sites: 3

c. Offshore Survey Area (10m LAT to 12nm Limit)

Method: Sampling intervals will be nominally every 15-20km. Use of grab sampling and still or video camera.

Sampling Sites: 6