FS007383

REPORT OF THE MARINE LICENCE VETTING COMMITTEE (MLVC)

ON

FORESHORE LICENCE APPLICATION FOR:

Site investigations for the proposed Oriel Wind Farm.

LOCATION:

Irish Sea, from the High-Water Mark to approximately 22 km off the coast of Dundalk, Co. Louth

APPLICANT:

Oriel Windfarm Limited

The Marine Licence Vetting Committee (MLVC)

The Marine Licence Vetting Committee (MLVC) is a non-statutory multi-disciplinary committee which is convened, as required, for the purposes of undertaking a technical assessment and an environmental assessment of an application under the Foreshore Act 1933, as amended. Members undertake to participate in each instance voluntarily, as representatives of their individual organisations.

The Foreshore Section of the Department of Housing, Local Government and Heritage requested the MLVC to undertake the technical assessment detailed below for case FS007383

1.0 Project Overview

Oriel Windfarm Limited (Oriel) is an Irish renewable energy company proposing to develop, subject to the relevant permissions, the Oriel offshore wind farm (the Project) located in the north-west Irish Sea, 22km off the coast of Dundalk, County Louth. The Project will include wind turbines mounted onto a foundation installed into the seabed, an offshore substation and interlinking cabling between the turbines and the substation and an export cable between the substation and the shore.

In May 2019 Oriel obtained a Foreshore Licence (reference no. FS 006840) for initial surveys in the offshore wind farm area and offshore cable corridor. Oriel undertook both onshore and offshore surveys and commenced the engineering design of the wind park. Oriel now intends to undertake further site investigations of the offshore wind farm area and the offshore cable corridor to investigate the stability of the soil (seabed sediments) for the design of foundations and the detailed routeing of the inter array and export cables.

Detailed geotechnical and geophysical investigations, ecological surveys and metocean surveys are planned. The purpose of the geotechnical investigation is to investigate the stability of the soil for the design of foundations and the detailed routing of the inter array and export cables. The purpose of the geophysical survey is to characterise the layers of sediment/rock underneath the seafloor and to achieve a detailed seabed morphology and seafloor mapping. This Foreshore Licence application is for permission to undertake these survey works on the proposed development site. Oriel proposes to apply for a licence for a duration of 36 months.

The Foreshore licence application area comprises the Oriel offshore wind farm area and the offshore cable corridor. The offshore wind farm area is located off the coast of County Louth to the east of Dundalk Bay, approximately 22km east of Dundalk, 18km east of Blackrock, 5km south of the Cooley Peninsula and 10km north-east of Dunany Point. The offshore wind farm area covers approximately 27.8km2. The offshore cable corridor is approximately 11km in length and covers an area of approximately 25km2. The proposed cable landfall is 700m south of Dunany Point, Co Louth. The area of foreshore involved is 53.002km$_2$

The output of Oriel Windfarm will be circa 375MW

The recently enacted Maritime Area Planning Act 2021 sets out special provisions for ORE projects satisfying the definition of “relevant maritime usage”. The Minister for Environment, Climate and Communications (the relevant Minister) was granted limited powers to invite applications for a Maritime Area Consent from ORE projects satisfying this definition for a specified period in advance of establishment of a new agency, the Maritime Area Regulatory Authority (MARA). Any project satisfying the definition of “relevant maritime usage” which is granted a MAC by the relevant Minister must seek the necessary development consent from An Bord Pleanála under the new consenting

regime. Applications for planning permission will involve public consultation and full environmental assessment as provided for under the Act.

At the time of drafting this report, the relevant Minister is considering a MAC application in relation to the Oriel Wind Farm project.

2.0 Brief Description of Works

Oriel is applying for a licence to complete the below surveys, which have been grouped into four types:
Geophysical surveys, Geotechnical and sediment sampling, Environmental/ecological surveys and sampling, Oceanographic and meteorological survey.

Geophysical surveys
-Multibeam Echosounder (MBES) system for detailed bathymetric mapping. The equipment will operate within a frequency range of 70-100 kHz with sound pressure levels in the range of 225-231dB re1µPa at 1 metre range.

-Side Scan Sonar (SSS) to achieve detailed seabed morphology and seafloor mapping. The equipment will operate within a frequency range of 100-500 kHz with source levels at 235dB re 1µPa at 1 metre range.

-Magnetometer to detect geomorphological anomalies and ferrous obstructions. The process is non-intrusive, and the device will not make any physical contact with the seabed at any point.

-Sub-bottom Profiling (SBP), both single and multi-sources, to identify and characterise the layers of sediment/rock underneath the seafloor. The equipment to be used will have a primary frequency of between 85 and 115kHz (with secondary low frequencies of between 2 and 20kHZ) and source levels of 235-245dB re 1µPa at 1 metre range.

-Ultra-high-resolution multi-channel seismic (UHRS) to identify and characterise the layers of sediment/rock underneath the seafloor within the offshore site area. It will have the following characteristics as a minimum:

-repeatable source,
-frequency range of between 1 kHz and 3.5 kHz,
-broadband width in excess of 2.5kHz at -10db,
-vertical resolution better than 0.5 metres,
-penetration 50 metres,
-variable energy levels 100-1000 Joules,
-record length suitable for the maximum depth required (250ms),
-sampling rate 0.25

-Intertidal geophysical surveys including seismic, electrical resistivity and electromagnetic methods.

USBL beacon may be used to precisely locate towed equipment (such as a sidescan sonar fish) relative to the vessel. Exemplar equipment includes Sonardyne Wideband Sub-Mini 6 Plus (WSM6+), Sonardyne Type 8300 Compatt 6, Kongsberg HiPAP which have a typical operating frequency of 20-40 kHz.

The geophysical survey will comprise transects with a total length of circa 84km and a distance of 1km between each transect. The seismic source will detect the geological strata to a depth of 40m below the seabed (bsb).

This will take approximately four weeks depending on weather conditions.

Geotechnical Survey & Sediment Sampling
27 deep investigation locations at proposed structure locations (25 wind turbines sites and two options for the offshore substation location). Each deep investigation location will require up to 3 drilled **boreholes** with a target depth of 50m below the seabed. In situ testing will include the option of either down-hole wireline piezocone penetration testing (PCPT) associated to PS logging or down-hole wireline seismic cone testing (SCPT) over the full length of a borehole. These tests involve a shear wave source, located on a downhole probe or on the drilling frame at the surface respectively, and downhole geophones. While the activity can be described as resulting in impulsive sounds, the source levels are minor (70dB). SCPT tests will be executed at a minimum of four of the locations, which will be confirmed following the results of the geophysical survey. Two seismic measurements shall be carried out during each SCPT stroke at a depth interval of 1m; the envisaged number is 40-60 SCPT tests in total. The boreholes will be advanced by alternating PCPT/SCPT and push/core sampling; requirements will depend on the material type encountered.

Forty one shallow investigation locations along proposed inter-array and export cable routes. Each location will require one **vibrocore** or **gravity** core with a target depth of 3m below the seabed. Vibrocoring is performed where cohesionless soil is expected. The vibrocorer will be lowered onto the seabed, after which the vibrocoring process will be started. Upon refusal or at target depth, the vibrocorer will be recovered on deck where the recovery rate is measured. Gravity core (wireline self-weight penetration sampler) will be performed where cohesive soil is expected. The gravity corer will be lowered on the seabed and will penetrate in the seabed under its own weight. Upon refusal or at target depth, the gravity core will be recovered on deck where the recovery rate is measured.

Up to 6 deep investigation locations in the intertidal area. Each location would be a drilled borehole with a target depth of up to 50m.

Up to 12 shallow investigation locations in the intertidal area. Each location would be an excavated trial pit or borehole with a target depth of 3m below the beach. Excavated locations to be backfilled immediately on completion of the investigation. Cores and CPTs may be taken from the boreholes or trial pits.

This will take approximately four to eight months depending on weather conditions. It will need to be extended if unforeseen ground conditions are discovered.

Environmental monitoring/ecological sampling
-Proposed to deploy up to 6 FPOD or CPOD devices to provide acoustic assessment of the presence/absence and species types of cetaceans (whales and dolphins). Each device will require a robust, heavy weight mooring blocks of *ca*. 250kg, clump chain and rope with either an acoustic release mechanism and benthic buoy or a robust mooring with a surface marker buoy. Batteries must be replaced and data downloaded every 3/4 months. Deployment and servicing would be undertaken from a survey vessels.

-Proposed to deploy up to 6 sondes for water quality monitoring of parameters including turbidity, salinity, temperature, pH, dissolved oxygen, electrical conductivity. Each sonde will require a robust, heavy weight mooring block, clump chain and rope with either an acoustic release mechanism plus benthic buoy or a robust mooring with a surface marker buoys.

-Benthic survey techniques may include drop down video (DDV) and deployment of a mini Hamon grab or van Veen grab to obtain samples of 1-5kg in mass each. Manual digging may be used in the intertidal zone to collect the samples. Samples would be analysed to determine the benthic faunal community present and sediment geochemistry.

-Up to 6 sondes may be deployed for the tracking of fish or shellfish within the windfarm and export cable corridor. Each sonde will require a robust, heavy weight mooring block, clump chain and rope with either an acoustic release mechanism plus benthic buoy or a robust mooring with a surface marker buoys.

This will take approximately 24 months depending on weather conditions.

Oceanographic and meteorological
-All metocean survey works will occur at one location within the marine survey area. Data will be collected via a floating weather station, which will include a wave rider and a wind measurement LiDAR current profiler. The wave rider will be used to collect wave height and current data across the site, while the LiDAR system will be used to measure the wind characteristics within the site.

This will take approximately 24 months weeks depending on weather conditions. This may be greatly reduced if findings are in line with existing data collected from previous survey.

Oriel proposes to apply for a licence for a duration of 36 months.

A foreshore licence if granted will permit those site investigation activities that will result in physical interaction with or disturbance of the Foreshore. The proposed site investigation activities which are the subject of this application are being fully assessed under the relevant environmental legislation.

3.0 Other Relevant Consents and Government Policies

Oriel was granted a Foreshore Licence in October 2005 (reference MS51/53/57) from the then Department of Communications, Marine and Natural Resources (DCMNR), giving permission to carry out a technical work plan to investigate the suitability of an area to the East of Dundalk Bay for the construction of an offshore wind farm. This included geotechnical site investigation, an engineering assessment and marine surveys for the completion of an Environmental Impact Statement (EIS).

Following the completion of this work Oriel applied for a Foreshore Lease to construct an offshore generating station in February 2007 (reference number MS53/59 FS006459). In Autumn 2008 the Marine Licencing Vetting Committee (MLVC) made a recommendation to grant a lease following two months of public consultation and various requests for further information. The project received a grid connection offer from EirGrid, the Irish Transmission Systems Operator, in April 2011. For a number of reasons, the development of the project was delayed.

In May 2019 Oriel obtained a Foreshore Licence reference no. FS 006840 for additional site assessment surveys in the offshore wind farm area and the export cable corridor. Oriel undertook both onshore and offshore surveys to support further engineering design of the wind park, the cable routes and the preparation of an EIAR and an NIS for submission with an application for development consent.

The published Programme for Government has committed to achieving 5GW capacity in offshore wind by 2030 off Ireland's Eastern and Southern coasts. Furthermore, the National Marine Planning Frameworks states that "Proposals that assist the State in meeting the Government's offshore renewable energy targets, including the target of achieving 5GW of capacity in offshore wind by 2030 and proposals that maximise the long-term shift from use of fossil fuels to renewable electricity energy, in line with decarbonisation targets, should be supported. All proposals will be rigorously

assessed to ensure compliance with environmental standards and seek to minimise impacts on the marine environment, marine ecology and other maritime users."

The Climate Action Plan 2021 recommits Ireland to the ambition to install 5GW of offshore wind capacity in our maritime area by 2030, and introduces a new objective, that by the same year, up to 80% of our electricity will be sourced from renewables. In addition to increasing our renewable energy share, these targets will support our carbon emission reduction commitments, meet anticipated increases in domestic electricity demand and increase our security of electricity supply.

4.0 Public Participation

The Foreshore Section of the DHLGH conducted the public consultation. All consultation was undertaken to conform to the requirements of the Section 19 of the Foreshore Act 1933 as amended, Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011and the European Directive 2003/35/EC (known as the Public Participation Directive or "PPD").

1st Consultation under section 19 of the Foreshore Act 1933

An initial consultation period was held between 15 December 2021 and 27 January 2022 (extended due to Christmas period). Notices announcing the consultation were published in the *Irish Independent*, *Dundalk Democrat* and *The Argus* on 14 December.

Application documents were made available throughout the consultation period in
-Planning Office of Louth County Council, Town Hall, Crowe Street, Dundalk, Co Louth
-Dundalk Garda Station, The Crescent, Demesne, Dundalk, Co. Louth

Application documents and notice of the consultation were published in the appropriate locations on the Department's website.

Following this consultation process, the Department's Foreshore Marine Advisor (Environment) was engaged to assess the application. The documentation submitted by the applicant was reviewed to assess whether it included the following:

- Robust scientific information and analysis including the reasoning and justifications for the conclusion.
- Compliance with the tests and standards of AA as presented in European and national guidance.
- A robust scientific assessment on the likelihood of significant effects.

The assessment was carried out on the entirety of information submitted as part of the consent application.

The Minister, on advice from this Department's Marine Advisor (Environment) concurred with the findings of the IEC and made an Appropriate Assessment (Stage 1) Screening Determination and concluded that a Stage 2 Appropriate Assessment was required.

2nd Consultation and Appropriate Assessment- (screening and assessment of appropriate assessment is dealt with below).

A copy of the application, the Appropriate Assessment Screening Determination and all other documentation relevant to the application were made available for public viewing from 14 June 2022 to 14 July 2022 at the following locations

-Planning Office of Louth County Council, Town Hall, Crowe Street, Dundalk, Co Louth
-Dundalk Garda Station, The Crescent, Demense, Dundalk, Co. Louth

Notification of the Public Consultation details were published in the *Irish Independent* and *Dundalk Democrat* on 14 June.
The Consultation was announced and documents were made available in the appropriate locations on the Department's website.

Public Submissions and Assessment

Two public submissions were received during the 1st consultation period and one public submission was received during the 2nd consultation period. In the interests of public participation any member of the public that had made a submission in the first period of public consultations was contacted individually to inform them of the second period of consultation. All public consultation submissions and applicant responses can be found on the Department's website and their contents have been considered as part of this assessment.

The two public submissions in the first consultation period came from Irish Whale and Dolphin Group and from NIFA/NIFO. The single public submission in the second consultation came from Cooley Residents Group.

IWDG raised issues concerning airguns, frequencies, High Resolution Geophysical Surveys and Mitigation Measures. These matters were dealt with as part of the assessment of the environmental information submitted which has included the comprehensive assessment of that information by specialised technical advisers retained by the Department.

In their joint submission, NIFO & NIFA wrote of very limited pre-application consultation with members. They wished to raise matters brought up by their members

- Importance of the area to Inshore Commercial Fishing Activity
- Likely disruption of said activity and the economic impact of it.

In considering the submissions which do raise concerns a number of issues need to be considered. This application relates to site survey work and is limited in duration and does not result in permanent development.

It is considered reasonable and appropriate that in the interests of balancing the needs of existing users of the marine environment with that of the prospective future users that appropriate liaison structures be established. In that regard it is noted that a fisheries liaison officer has been employed by the applicant. This appointment should be formalised as a required condition of any licence that may be granted.

5.0 Prescribed Bodies Consultation

Foreshore Regulations 2011 (S.I. No. 353 of 2011) provides under regulation 3 that when considering a foreshore application, as set out under section 18A (1) of the Act of 1933, the Minister may seek observations from a number of prescribed bodies. For this application, observations were requested during both consultations from:

- Marine Institute
- Marine Survey Office
- Department of Housing, Local Government, and Heritage Underwater Archaeology and Nature Conservation Units
- Department of Agriculture Food and the Marine (Aquaculture)
- Sea Fisheries Protection Authority
- Inland Fisheries Ireland (IFI)
- Louth County Council
- Water and Marine Advisory Unit – Engineering and Environment (DHLGH)

Observations on the application were received from each of the bodies, except SFPA, contacted during the 1st Consultation.

There were 5 responses for the 2nd consultation from Marine Institute, IFI, Marine Advisors (Engineering and Environmental) from Department of Housing, Local Government, and Heritage and the Commissioners of Irish Lights (CIL is newly added to the PB list)

All submissions made by the prescribed bodies have been considered as part of this assessment.

The prescribed bodies that responded had no objection, in principle, to the project and provided commentary which is listed in the consolidated Prescribed Bodies Submissions document on the Department's website. A number of the submissions from the Prescribed Bodies raised particular observations and put forward suggested conditions to be included in any consent issued, these will be considered for their appropriateness. In particular it is recommended that particular conditions be placed on any prospective licence to require the applicant to co-ordinate the timing of activities so as not to effect migration of fish species and to co-ordinate the appropriate transmission of underwater archaeological information. These particular issues have been identified and are considered to be appropriately dealt with by condition as outlined above.

6.0 Environmental Assessment

The Department's in-house Marine Advisor (environment) provided assistance with regard to the statutory and non-statutory environmental assessments of this Foreshore Licence application. The MA conducted independent assessments of the information provided by the Applicant, having regard to the Habitats Directive, the Birds and Natural Habitats Regulations and the public and prescribed bodies' consultations.

Environmental Impact Assessment (EIA) Regulations: The submitted application is for site investigations only. The environmental effects of the proposed activities have been considered by the Department's in-house Marine Advisor (environment). Their report forms part of the basis of this assessment and is considered robust and comprehensive. Prospective environmental effects have been considered as has the received third party submissions. With respect to uses specified under the EIA directive. A number of boreholes are proposed as part of this activity to ascertain the soil conditions in the survey area. The proposed project is for site surveying including boreholes to test the suitability of the sub sea bed conditions. This activity which is to ascertain soil stability does not

fall within the classes defined under Annex I or Annex II of the EIA Directive and it is concluded based on the referred to report and the developments outlined in the Annex's of the EIA directive that an EIAR is not required.

Article 6(3) of Directive (92/43/EEC) (as amended) (Habitats Directive): Following a review of the proposed project, including assessment of the applicants Natura Impact Statement, which included a Screening Appraisal for Appropriate Assessment, it was concluded that likely significant effects could not be excluded for localised noise disturbance to marine mammals, for pollution arising from accidental spillage from hydrocarbons and possible effects arising from the use of sand grabbers. Likely significant effects resulting from underwater noise effects could also not be excluded at the screening stage for certain Annex II marine mammal species. It was therefore concluded that likely significant effects on the conservation objectives of marine mammals in combination with the proposed project could not be excluded. Therefore a Stage 2 Appropriate Assessment was required.

Having considered the application and the Screening for Appropriate Assessment Report which was accepted by Marine Advisor (env), the Screening for Appropriate Assessment and its conclusions is agreed with and an Appropriate assessment was required to consider the effects of the activated outlined above.

As a result of the outcome of the Screening for Appropriate Assessment, a Stage 2 Appropriate Assessment was submitted by the applicant and its contents assessed. The document included control and mitigation measures for possible underwater disturbances due to noise (adopting NPWS Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters, 2014), possible pollution caused by hydrocarbons during operations and implications of sand grabbing activities in connection with site surveying work.

A range of 15 SAC's and 19 SPA's were specifically referenced and considered to be within the Zone of Influence of the proposed project. These are considered to be a comprehensive and appropriate list of those sites which could be potentially affected by the proposed activity which is temporally and physically limited. The screening process determined that likely significant impacts as a result of underwater noise from geophysical surveys on Annex II species of marine mammals from twelve SACs could not be rule out without mitigation. The possibility of significant impacts from accidental hydrocarbon spillage to two Annex I marine habitats at one SAC and a single coastal habitat at another was also recognised.

Mitigation measures were identified to ensure that any impacts on the Annex II species or the Annex I habitats would not occur.

Having considered the application, the submissions from the public and prescribed bodies' consultations, the Marine Advisors (environmental) Appropriate Assessment report concluded '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 a significant effect on European sites.'

Article 12 of the Habitats Directive (92/43/EEC) affords strict protection to those species listed in Annex IV, wherever they occur. Therefore a risk assessment to Annex IV species from a project must take place prior to commencement of works. Such a risk assessment has been undertaken for this project under the title of "Article 12 Assessment". This identifies underwater noise as the primary risk to cetaceans, all species of which are considered Annex IV species. Mitigation for this is strict adherence to NPWS (2014) Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters. It is considered that the environmental aspects of this proposed

application have been comprehensively assessed and it concluded that subject to the proposed mitigation measures that the proposed activities are acceptable.

7.0 Estate Management

All foreshore is presumed state owned unless proven otherwise. In this case there are no known established claims of private ownership of the foreshore at this location and no claims of private ownership were raised during the application and public consultation process; therefore, the foreshore the subject of this application is state owned. Accordingly Section 3 of the Foreshore Act applies for the proposed site investigation. The licence area for this proposed site investigation application is shown on the map submitted by the applicant.

It is considered that from an estate management point of view the location and activities proposed are considered to be acceptable. For clarity the submitted map should be attached to any licence issued. The applicant shall use that part of the foreshore, the subject matter of the application for the purposes as outlined in the application and for no other purposes whatsoever. Where relevant the foreshore and adjacent seashore area shall be restored to its original condition on completion of the works to the satisfaction of the Department of Housing, Local Government and Heritage.

8.0 Public Interest

Section 2 and 3 of the 1933 Foreshore Act, as amended, states that a lease or licence of state foreshore may be granted "If, in the opinion of the Minister, it is in the public interest". As foreshore is a finite and valuable national resource and public amenity, it is important that each plan and project is fully assessed to ensure, that if consented to, it is a sustainable and proper use of that finite and valuable resource. In assisting the Minister to establish if a particular plan or project is in the public interest, it is considered that while taking note that the state owned foreshore is finite resource which must be utilised sustainably, the proposed project is in the Public Interest, as it supports Government policy to support the development of off shore wind power which will allow for increased sustainable energy supply not only environmentally but also from a security point of view.

9.0 MLVC Conclusions

This application is for the carrying out further more detailed site survey work to inform future development of off shore wind array. It is considered that this site surveying activity is required to inform an application for an off shore wind array, in the general area outlined on the submitted maps. It is further noted that this proposed array is a project that satisfies the definition of relevant maritime usage under the Maritime Area Planning Act and its progression through the various consenting process has been accorded a high priority.

Submissions by the public and the prescribed bodies have been considered and responded to by way of proposed conditions in Section 10. In particular the issues raised through submissions have been considered both as part of this report but also as part of the environmental assessment reports, all of which form the overall assessment of this proposed application.

In response to the public submissions issues relating to wild life have been considered as a part of the appropriate assessment and mitigation measures proposed which will form conditions attached. In relation to matters raised relating to visual amenity and interaction with the local community. These are legitimate concerns but are considered to relate to a development proposal for an off shore wind development. This is not what is proposed as part of this application. Instead the matter at hand

relates to surveying work which will inform the appropriateness or not of proceeding with a proposed future development. The work is both temporally and physically temporary. A future proposed development if it comes to pass will be the subject of a separate assessment process which will include public participation and would include as part of its assessment consider the matters raised.

Significant appropriate consideration has been given to environmental matters by the Departments Marine Advisor Environmental which is reflected in this report. The supporting environmental reports formed part of this assessment. It is considered that subject to the appropriate conditions that there will not be adverse environmental consequences arising from this application.
In the interests of co-ordinating the appropriate, efficient and timely site surveying work being carried out by a number of parties, in the general area ,it is considered both prudent and reasonable that that the timing of these proposed activities be co-ordinated to avoid the carrying out of similar activities at the same time in the same area. It is recommended that this should form part of the conditions attached.

The development of off shore wind developments is an important element of Government energy policy which has been further enunciated in the recently published energy security framework. It is both necessary and appropriate that surveying work be undertaken so as to site future proposed wind arrays in locations that is geotechnical safe. This application is such an activity and is considered to be necessary and appropriate.

It is concluded that taking account of the totality of the documentation on file and subject to compliance with the specific conditions set out below, the proposed works will not adversely affect Fishing, Navigation or the Environment and is in the Public Interest.

It is recommended that a foreshore licence be issued, subject to the conditions set out below.

10.0 PROPOSED SITE CONDITIONS:

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 works shall be located as outlined on Map No: Map No: FL001 Rev F1 Date 2021-11-07 and entitled 'Foreshore Licence Map'.

3. The Licensee shall notify the Department of Housing, Local Government and Heritage at least 14 days in advance of the commencement of any works on the foreshore. Prior to this notification the applicant shall engage with other licence holders in the survey area as submitted to ensure that no temporal overlap between two or more projects occurs. Documentation clearly demonstrating this shall be submitted as part of this notification

4. During the course of the works the Licensee shall ensure that existing public access arrangements are maintained, where possible, and all necessary precautions are put in place to protect the public in accordance with relevant Health and Safety Legislation.

5. At the end of each phase and/or calendar year, the Licensee shall inform the Department of the work completed to date and the works planned for the coming year.

6. The Licensee shall submit, to the Department, the 'as deployed' location for all monitoring devices and shall issue appropriate marine notices.

7. On completion of the site investigation the Licensee shall ensure that all equipment and materials are removed and the foreshore is reinstated to its natural condition to the satisfaction of the Department of Housing, Local Government and Heritage.

8. 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.

9. The licensee shall ensure that vessels used in the survey vessels are free of invasive marine species on their hulls and in their ballast water. Method statement to that effect should be submitted to the competent authority.

10. The licensee shall ensure that there is strict adherence to the DAHG 2014 *Guidance to man-made sound sources in Irish waters*. This includes the use of soft-start and ramp-up procedures for any sound generating surveys undertaken on both a day-to-day basis and on re-start after any stoppages with any day.

11. The IFI guidance in relation to construction works adjacent to water shall be adhered to.

12. Marine mammal observers (MMO)shall be employed during operations including a 'soft start' protocol.

13. Should a pollution incident occur, the applicant must contact SFPA Howth immediately so protective measure can be put in place to avoid potentially contaminated shellfish being placed on the market or food chain.
14. All geophysical survey activities shall be licenced by the Department of Housing, Local Government and Heritage under the National Monuments Acts 1930-2014 and should any dive surveys be required in connection with proposed geophysical surveys and archaeological surveys these shall also be licenced under the Acts and obtained by a suitably qualified archaeologist with underwater/marine experience. Any dive survey shall be accompanied by a hand-held detection survey which shall also be licenced under the National Monuments Acts 1930-2014.

15. An Underwater Archaeological Impact Assessment of all proposed geotechnical works, including secondary impacts such as machinery movements, shall be prepared by a suitably qualified archaeologist with maritime and underwater experience. All geophysical survey data sets available from previous work for the proposed development area and all newly obtained geophysical survey data sets shall be made available to the archaeologist and shall be incorporated into the assessment report. The assessment shall also include a desk study and a licenced wade/intertidal survey and licenced metal detection survey of the intertidal area and a walkover of the beach areas within the application area. The overall results of the assessment shall be compiled into a report and forwarded to the National Monuments Service for review and comment in advance of the geotechnical works taking place. The assessment shall also include proposals for the protection of the 'Mad Chair of Dunany' by institution of a minimum 10m buffer/exclusion area around the site during all works and for buffer/exclusion zones around all identified and potential wreck sites and other areas of archaeological potential. Similarly, the report shall include proposals for mitigation of potential impacts on archaeology, such as avoidance, dive surveys, monitoring or test-excavations. No geotechnical works shall be undertaken in advance of receipt of observations on the report from the National Monuments Service.

16. All areas of the seabed where site investigation works will take place should be subject to a high resolution geophysical survey (ideally 50m line spacings) in advance of works taking with the results assessed by a suitably qualified archaeologist. Where archaeological assessment of geophysical data is not possible, or data is not available or of sufficient resolution/standard and an impact on the seafloor/inter tidal zone is expected, it is recommended that a dive/ intertidal survey is carried out accompanied by a metal detection survey. Both the dive survey and the metal detection survey should be licenced under the National Monuments acts 1930-2014.

17. The results of all geotechnical works, including core samples and other geotechnical samples, shall be made available for assessment to the consultant archaeologist for review. Such assessment shall seek to identify any cultural material contained within the samples and evidence for palaeo-environments. A follow up Archaeological Report detailing the results of the assessment of geotechnical samples shall be forwarded to the National Monuments Service for review and consideration and to inform any future Foreshore/Planning application for the proposed offshore windfarm.

18. Any works adjacent to existing Aids to Navigation (The Dunany buoy lies within the foreshore boundary limit) shall ensure a safe separation taking particular attention to the strength of wind and tidal conditions.

Note for applicant: It is a matter for the applicant to satisfy themselves that they have other appropriate regulatory consents that may be needed including Dumping at Sea permit required from the Environmental Protection Agency (EPA) and Annex IV Derogation Licence application which must be submitted to and determined by NPWS . Details available at https://www.npws.ie/licensesandconsents/disturbance/application-for-derogation-licence

Colin Ryan Senior Planning Adviser BA (hons), MSc, MBA, MIPI

22nd September 2022