

Our Ref: 006517534-01

Foreshore Section,
Department of Housing, Planning and Local Government

Newtown Road Wexford

Y35 AP90

06 January 2020

FS007029 Foreshore Licence Consultation Response from the Marine Survey Office

Dear

Thank you for providing the response from the Marine Survey Office (MSO) of the Department of Transport, Tourism and Sport dated 22 October 2019.

I note that the MSO have no objections to the proposed works at this time.

Yours Sincerely,

MANAGER





Our Ref: 003517525-01.

Foreshore Section, Department of Housing, Planning and Local Government Newtown Road

Wexford Y35 AP90

16 January 2020

FS007029 Foreshore Licence Consultation Response from the Marine Institute

Dear

Thank you for providing the response from the Marine Institute to the recent consultation on Foreshore Licence application reference FS007029, dated 07 November 2019.

I note that the Marine Institute is satisfied that the site investigations as proposed will not have a significant impact on the marine environment in the survey area and will not have a significant impact on other legitimate uses / users of the area and therefore has no objections to a licence being granted.

innogy agree with the Licence conditions recommended by the Marine Institute, which are:

- 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 ensure that the works are carried out and completed in accordance with the plans and particulars lodged with the application.
- 3. The Licensee shall appoint a Fisheries Liaison Officer who will consult with the SFPA and relevant fishermen's groups in order that appropriate actions can be taken to avoid or minimise interactions with ongoing fishing activity in the area during the course of the site investigations.

A Fisheries Liaison Officer (FLO) has been appointed to the project and engagement with the fisheries sector has commenced. It is our intention that this engagement will continue throughout the lifetime of the project and will be supported by the services of the FLO.

I would like to thank the Marine Institute for their response.





Our Ref: 003517731-01.

Foreshore Section,
Department of Housing, Planning and Local Government,
Newtown Road,
Wexford.
Y35 AP90

18 February 2020

FS007029 Foreshore Licence Consultation Response from Inland Fisheries Ireland

Dear

Thank you for providing the response from the Inland Fisheries Ireland (IFI) to the recent consultation on Foreshore Licence application reference FS007029, dated 22 October 2019.

Timing of proposed works:

The IFI have asked for clarification on the timing of the proposed surveys. The timing and durations of the survey elements are dependent upon a number of factors, including timescale in which the Foreshore Licence is determined, agreement of programme-related mitigation measures proposed within the application, availability of suitable Contractors and vessels to undertake the work, and weather windows.

The indicative timing of surveys given within section 1.8 of the Application Form and Table 1 of the Planning Report describe a programme of marine surveys which take place over a four-five-month period between July and October 2020. The overall programme of surveys includes a number of individual activities of short duration, e.g. sub-tidal geophysical survey would be expected to be completed in approximately 4 weeks, environmental grabs and geotechnical samples would be expected to be collected over 4-8 weeks. The metocean monitoring equipment will be deployed as soon as possible, noting that there may be predeployment conditions within the Foreshore Licence which, if our application is successful, we will discharge prior to installation. There is also a requirement to temporarily deploy the Floating LiDAR unit for calibration close to the source of existing wind data on the Kish Lighthouse prior to relocating the unit to the measurement location.

As the text of paragraph 2.11 in the Planning Report indicates, we will, if possible, undertake elements of the survey concurrently in order to reduce the duration from the estimated four – five-month period. Whilst a full survey of the OWF Lease Application Area and a 500 metre buffer is necessary, we will seek, where possible, to minimise the spatial extent and duration of the survey coverage within the export cable search corridor limiting same to the emerging preferred routes identified at that time, as opposed to the entire survey area as defined by the overall boundary indicated in Foreshore Licence Map 1. In the event that a subsequent review of the survey data indicates the presence of features, including natural geology, archaeological or ecological features, which would not be compatible with cable installation, we would undertake a subsequent targeted geophysical survey campaign for alternative cable





routing options whilst ensuring that we remain within the original geophysical survey boundary defined within the Foreshore Licence application.

We are happy to discuss with IFI the migration periods for fish species and timing of IFI surveys in the area and accommodate these within our programme if at all possible, noting that there are a number of other constraining factors which will also need to be addressed. We would also note that migratory species, including Atlantic salmon and lamprey are neither sensitive to the very high frequencies produced by MBES or the lower frequencies associated with SBP equipment, Hawkins & Johnstone, 1978¹ and Harding, Bruintjes, Radford and Simpson, 2016². Any effects upon migration arising from the proposed range of geophysical surveys are therefore unlikely to occur. It should also be noted that the Marine Institute, the NPWS and the Sea Fisheries Protection Authority did not provide an objection to the undertaking of the surveys as set out in the Foreshore Licence application.

Requirement for survey:

The IFI have suggested that it may not be necessary to undertake all the surveys which are proposed due to some survey work having previously been undertaken for the project. The requirements for the proposed survey are to ensure adequate spatial coverage of the study area, suitability of geophysical data for preliminary engineering design and provision of comparative data with previous data sets. Seabed bathymetry will change over time due to the unconsolidated nature of surficial sediment It is critical for environmental assessment and engineering design that up to date information is obtained and the rate and nature of any change in bathymetry is understood.

Bathymetric data (single beam echosounder) and sub-bottom data was collected by Hydrographic Surveys Ltd (HSL) between June and September 2008 in preparation of the original Environmental Impact Statement (EIS) for the project. This survey was focussed on the proposed Foreshore Lease areas and a narrow cable corridor running due west from the centre of the array before splitting nearshore to two indicative landfalls, one to the north of Bray the other at Shanganagh cliffs. Data was not collected from most of the cable search area or for any of the three landfalls currently under consideration. The data obtained was relatively coarse, gathered using a single-beam echosounder (SBES) and gridded to approximately 20 m resolution. Whilst this was sufficient for Environmental Impact Assessment purposes it is not detailed enough for preliminary engineering design.

The area has also been surveyed as part of the INSS/INFOMAR programme. These surveys included a range of techniques including multibeam echosounder (MBES), SBES, sub-bottom profiling and magnetometer. The INSS/INFOMAR surveys undertaken in 2003, 2008, 2010 and 2016 taken together provide coverage of the majority of the area of interest to the project. There remain some small areas for which no data is currently available. The proposed survey methodologies are similar to the INSS/INFOMAR methods and will provide an opportunity for comparisons to be drawn across an extensive time period. This is particularly important in understanding long-term seabed/sandwave mobility patterns which are important considerations when developing turbine foundations, determining optimum cable routes and burial depths.

² Harry Harding, Rick Bruintjes, Andrew N Radford and Stephen D Simpson (2016) Measurement of Hearing in the Atlantic salmon (*Salmo salar*) using Auditory Evoked Potentials, and effects of Pile Driving Playback on salmon Behaviour and Physiology Scottish *Marine and Freshwater Science Report Vol 7 No 11*



¹ Hawkins AD & Johnstone ADF (1978) The hearing of the Atlantic salmon, Salmo salar. Journal of fish biology, 13, 655-673



The geotechnical information currently available is limited and vibrocores are therefore proposed to provide a more extensive data set across the full proposed lease and export cable search areas. Additional information regarding the geology in the vicinity of three possible landfall locations is also required.

Reduction in noise emissions and ramp-up procedures:

innogy have already taken steps to reduce the sound output of the surveys for example by proposing different sub bottom profiling equipment in different areas of the site dependent upon the depth of data required. Deep geological cross-sections to approximately 60m are required only within the proposed wind turbine array area whereas within the cable corridor shallow penetration is sufficient and equipment with lower energy and sound pressure levels will therefore be used.

The publication by the Department of Arts, Heritage and the Gaeltacht Guidance to Manage the Risk to Marine Mammals from Manmade Sound in Irish Waters (DAHG, 2014) will be followed. This guidance, although focussed on mitigation for marine mammal species includes detailed ramp-up procedures which innogy have committed to implement and will benefit a wider range of species that are able to detect underwater sound pressure.

Cumulative effects:

A number of Foreshore Lease /Licence Applications within the vicinity of the Kish and Bray Banks which have either been determined but not yet implemented or have been submitted but not yet determined are identified in Table 2 of the Planning Report submitted in support of the Foreshore Licence Application. There are no predicted temporal or spatial overlaps between the surveys which innogy propose to undertake and works associated with other Foreshore Lease/Licences granted or in process which have been identified, therefore no cumulative effects with other proposed works are anticipated. Significant behavioural effects on fish species arising from the proposed surveys alone are not anticipated, as behavioural effects are likely only in close proximity to the noise source and behaviour is likely to return to normal within relatively short periods once noise has ceased³.

The potential for effects from the proposed survey activity for Dublin Array upon Natura 2000 Sites in-combination with other plans and projects are assessed within the AA Screening and Natura Impact Statement, Annex E to the Planning Report. No in-combination effects are predicted due to spatial and/or temporal separation of the proposed plans and projects.

Lidar safety issues:

The FLiDAR and wave measurement devices selected will be robustly designed and constructed for deployment in hostile marine environments and will be inspected and maintained as a minimum in accordance with manufacturers recommendations. Limited quantities of battery acid and diesel are present and the batteries and fuel tanks are contained within sealed compartments. Additionally, there are water intrusion sensors integrated into the battery compartments for indication of seal breach. Maintenance activities may occur at 6 or 12-month intervals depending upon the final choice of equipment. The FLiDAR unit will be recovered and transferred to the quayside for maintenance and refuelling, where appropriate containment measures will be in place to avoid any spillage entering the marine environment. All operations, equipment and vessels engaged in undertaking the proposed works will conform as a minimum to legislative requirements and guidance, including International Convention for the Prevention of Marine

³ McCauley, R. D., Fewtrell, J., Duncan, A. J., Jenner, C., Jenner, M-N., Penrose, J. D., Prince, R. I. T., Adhitya, A., Murdoch, J. and McCabe, K. (2000) Marine seismic surveys – A study of environmental implications. *Appea Journal*.





Pollution from Ships (MARPOL 73/78) which is transposed into Irish law by the Sea Pollution Act 1991; Sea Pollution (Amendment) Act, 1999 and Pollution Preparedness, Response and Co-operation, 1990 (OPRC).

Consultation with other bodies:

innogy confirm they have consulted with the Sea Fisheries Protection Authority (SFPA) regarding commercially fished species at all life stages. The SFPA have raised no comments in relation to the surveys proposed.

We would like to thank the IFI for the detailed response and would welcome the opportunity to discuss with the IFI's Eastern Region RBD the migration times of fish and the programme of scientific studies which IFI conduct in the area in the event that we are successful with our licence application





Our Ref: 00353685-01

Foreshore Section,

Department of Housing, Planning and Local Government,

Newtown Road,

Wexford.

Y35 AP90

04 February 2020

FS007029 Foreshore Licence Consultation Response from Dun Laoghaire Rathdown County Council

Dear

Thank you for providing the response from the Dun Laoghaire Rathdown County Council (DLRCC) to the recent consultation on Foreshore Licence application reference FS007029, dated 15 November 2019.

DLRCC made a number of observations which are discussed in turn below.

Observation 1:

The environmental aspects identified by DLRCC in their submission have been considered within the supporting documentation that accompanied the Foreshore Licence application.

Environmental Aspect Identified by DLRCC	Where addressed within Foreshore Licence Application documents
Intertidal and benthic communities (including designated reef features)	Planning Report para 17.4 Planning Report Annex E – AA Screening and Natura Impact Statement - Table 3 includes the list of SACs considered in the screening exercise; Section 5 Natura Impact Statement considers the effects of the proposed survey on the South Dublin Bay SAC, North Dublin Bay cSAC and Rockabill to Dalkey SAC. Based on the assessment of the proposed survey activities alone and in combination with other projects and plans, including the implementation of mitigation measures, it can be concluded that no adverse effects on the site's integrity will arise, in view of the site's conservation objectives.
Protected Sites (Natura 2000 and proposed National Heritage Areas (pNHAs))	The proposed surveys will not have a direct impact upon the pNHA 001206, Dalkey Coastal Zone and Killiney Hill, which is outside the footprint of the works. The proposed surveys are not anticipated to impact upon marine species and habitats nor on breeding or autumn and winter roosting birds which are identified in the Site Synopsis.





Environmental Aspect Identified by DLRCC	Where addressed within Foreshore Licence Application documents
	pNHA 00210, South Dublin Bay and 000714, Bray Head now SACs and are considered in Planning Report Annex E.
Protected Habitats and Species	Consideration of protected habitats and species is presented in Planning report section 17 and Annex E.
UNESCO Biosphere	Core zones are coincident with Natura 2000 sites.
Fish and fish spawning areas	Planning Report section 13.
Birds (including marine, summer and wintering bird species and their foraging/roosting areas)	Planning Report section 17 and Annex E
Marine mammals	Planning Report section 17 and Annex E
Archaeology	Planning Report section 16 and Annex D
Marine Activity	Planning Report sections 12 and 13
Recreational Resource	Planning report section 12
Waste Management	Planning report section 11

Observations 2 and 3:

DLRCC identify a number of Natura 2000 sites within, or close to, the boundary of the proposed Foreshore Licence area. These include:

Site code	Name
000210	South Dublin Bay SAC
003000	Rockabill to Dalkey Island SAC
004024	South Dublin Bay and River Tolka Estuary SPA
004172	Dalkey Islands SPA

The Appropriate Assessment Screening process undertaken for the proposed works concluded that no significant effects on Dalkey Islands SPA were likely. This site is located 1.2km from the proposed survey boundary at its closest point. There is regular boat traffic in the vicinity of the SPA and the introduction of survey activity of short duration would have negligible effect and the site was consequently screened out at this stage. The remaining sites listed above were all carried forward into Stage 2 Appropriate Assessment. With the mitigation measures set out in Annex E to the Planning report no adverse effects on the integrity of the Natura 2000 sites are anticipated.





DAHG, 2014, Guidance to Manage the Risk to Marine Mammals from Man-made Sound in Irish Waters will be followed which includes provision of qualified Marine Mammal Observer to implement the proposed mitigations. Additional mitigation commitments have also been made as set out in Annex E to the Planning Report. innogy would be willing to provide reports regarding the implementation of the mitigation measures to the relevant body if this is considered necessary.

Observation 4:

innogy have identified, through desk-based studies and consultation activities, a number of cetacean and bird survey reports and data sources of relevance to the area of the Kish and Bray Banks. As part of our general development activities for the Dublin Array project we will continue to engage with DLRCC and welcome their offer of continued engagement.

Observation 5:

innogy confirm they will check the location of all underground assets in the inter-tidal and sub-tidal area prior to undertaking any intrusive works which may interact upon such assets. Measures will be put in place to protect, maintain and avoid damage to existing services encountered in the survey area or likely affected by the surveys, including liaison with all relevant utility providers (including DLRCC) in advance of the surveys and compliance with all utility recommendations and advice concerning survey locations adjacent to or with existing services.

Observation 6:

innogy are aware of the land use zonings in the area of the possible landfall locations at Shanganagh Cliffs and Shanganagh Park and of the Specific Local Objective 93 regarding the S2S Promenade and Cycleway. The proposed survey activities which are the subject of the current Foreshore Licence application will not impact upon the zoning or development objectives in these areas. We look forward to continuing discussion with DLRCC regarding the potential landfall and onshore transmission infrastructure which will form part of the proposed offshore wind farm development consent in due course.

We would also like to thank DLRCC for providing their detailed response and for their support for initiatives which facilitate the development of offshore wind.







Foreshore Section,
Department of Housing, Planning and Local Government
Newtown Road
Wexford
Y35 AP90

Your Ref: FS007029

Our Ref: 003517534-01

04 February 2020

FS007029 Foreshore Licence Consultation Response from the Department of Agriculture, Food and the Marine

Dear

Thank you for forwarding the email from the Department of Agriculture, Food and the Marine (DAFM) in response to the consultation regarding Foreshore Licence application (FS007029).

innogy have committed to following best practice techniques and guidance in undertaking the works proposed within the Foreshore Licence and of implementing the mitigation measures set out in the Planning Report and relevant Annexes which were submitted in support of the application.

We intend to maintain a Fisheries Liaison Officer for the duration of the works and will continue to engage with the fishing sector.

We have been in discussion with BIM regarding the presence of seed mussel beds in the vicinity of the Kish and Bray Banks and have recently received data from surveys conducted between 1970 and 2016. These data show subtidal seed mussel beds on the east coast to be outside the proposed survey area. We have also reviewed the reports prepared to inform the Appropriate Assessment for Fisheries Plan for mussel seed in the Irish Sea, 2018-2022, which shows the closest historical seed mussel beds to the project to be inshore of the Codling Bank, to the south of Greystones and therefore outside the boundary of the proposed site investigations and survey area. I understand that some small, seed mussel beds have occasionally been observed close to the Shanganagh Waste Water Treatment Plant outfall; this settlement is not harvested due to its ephemeral nature. We appreciate that the location of seed mussel beds will change over time and therefore will ensure that we continue to engage with BIM and monitor the latest data during the project development process.

We would like thank DAFM for their response.







Our Ref: 003517541-01

Foreshore Section,
Department of Housing, Planning and Local Government

Newtown Road,

Wexford.

Y35 AP90

05 February 2020

FS007029 Foreshore Licence Consultation Response from the Water and Marine Advisory Unit of the Department of Planning, Housing and Local Government.

Dear

Thank you for forwarding the response from the Water and Marine Advisory Unit (WMAU) of the Department of Planning, Housing and Local Government, dated 21 January 2020, in response to the consultation regarding Foreshore Licence application (FS007029).

We welcome the response from the WMAU and note that subject to inclusion of a number of recommended conditions they have no objection to the granting of the Licence. We agree with the recommendations made by the WMAU as follows:

- 1. innogy will notify the DPHLG of the data of commencement of operations at least 2 weeks prior to commencement.
- 2. At the end of each calendar year, innogy will inform DHPLG of the work completed to date and works planned for the coming year.
- 3. All works will be completed in accordance with the drawings and documents submitted in support of the application.
- 4. During the course of the Site Investigation/Survey operations innogy will ensure from a health and safety perspective that;
 - All necessary precautions will be 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 will not be impeded by any vessels, plant or materials used in the proposed works. Where necessary appropriate signage/notice and barriers will be provided to the satisfaction of DHPLG:
 - c. Procedures will be adopted to ensure that the site investigation/survey operations are not injurious to fishing, navigation, adjacent lands or the public interest.
- 5. All vessels and floating equipment will meet the certification requirements of the Marine Survey Office.
- 6. innogy will ensure that on completion of the Site Investigations/Surveys that all equipment and materials are removed and the foreshore is reinstated to its original condition to the satisfaction of DPHLG.





- 7. Marine Notices will be issued and lighting and marking undertaken in consultation with the Marine Safety Directorate of the Department of Transport, Tourism and Sport and Commissioners of Irish Lights.
- 8. innogy confirm that the ecological mitigation as set out in Annex E to the Planning Report submitted in support of the Foreshore Licence application will be implemented, this includes a commitment to comply with DAHG, 2014, "Guidance to Manage the Risk to Marine Mammals from Man-Made Sound Sources in Irish Waters", including deployment of a Marine Mammal Observer.

We would like thank the WMAU for their response.







Our Ref: 003614858-01

Foreshore Section,

Department of Housing, Planning and Local Government

Newtown Road

Wexford

Y35 AP90

26 May 2020

Foreshore Licence Consultation Response from the Development Application Unit (Archaeology) Ref M00088/2019

Dear

Thank you for providing the response from the Development Application Unit (DAU) of the Department of Culture, Heritage and the Gaeltacht (DCHG), dated 25 November 2019.

We welcome the submission from the DCHG which sets out its heritage related observations/recommendation. We note that the DCHG have no objection in principle to the Foreshore Licence being granted and have recommended that a number of conditions be attached, subject to your Department being mindful to grant the licence.

The DCHG have recommended a number of mitigation measures with which we agree in principle. We believe that the specific mitigations proposed by DCHG will be captured by the inclusion of the following conditions,

- 1. 'The proposed marine geophysical surveys should be licenced under the National Monuments Acts 1930-2014. The intertidal geotechnical surveys should be accompanied by a hand-held metal detection survey which should also be licenced under the National Monuments Acts 1930-2014.
- 2. A 100m exclusion zone shall be established around the furthest known extent of all known wrecks with the exception of wreck site at 53 16.200N, 05 56.500W where an exclusion zone of 300m shall be established. The Licensee shall inform the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht in the event that proposed works shall impinge on such exclusion zones.
- 3. The Licensee shall ensure that all available geophysical data for metocean monitoring equipment locations 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.
- 4. The Licensee shall ensure that the geophysical surveys are carried out in advance of the marine and intertidal geotechnical works (cone penetration tests, vibrocores and boreholes) taking place. The geophysical data for all proposed geotechnical

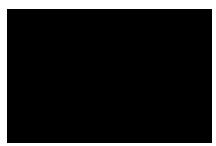




investigation locations shall be assessed by a suitably qualified archaeologist to ensure that the proposed works do not negatively impact on locations where there is known or potential archaeology.

- 5. A report summarising the archaeological assessment of the geophysical data, including detailed charts showing the location of the magnetic anomalies, the wreck sites and the sidescan sonar anomalies (debris etc) and their associated exclusion zones in relation to the proposed investigation works shall be forwarded to the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht for review prior to the commencement of each of the following licenced activities,
 - marine geotechnical works,
 - deployment of metocean monitoring equipment, and
 - inter-tidal geotechnical works.
- 6. 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 Licensee shall be prepared to be advised by the Department of Culture, Heritage and the Gaeltacht in this regard.
- 7. The results of the geotechnical investigations should be assessed by a suitably qualified archaeologist and this assessment should form part of the overall archaeological assessment of any proposed windfarm development.'

Should you require any further information, please do not he sitate to contact me. $% \label{eq:contact} % \label$







Foreshore Section,
Department of Housing, Planning and Local Government

Our Ref: 003517537-01

Your Ref: FS007029

Newtown Road Wexford

Y35 AP90

04 February 2020

FS007029 Foreshore Licence Consultation Response from the National Parks and Wildlife Service

Dear

Thank you for providing the response from the National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht dated 21 January 2020.

I note that NPWS have no comment on the proposed Foreshore Licence application.





Foreshore Section,

Department of Housing, Planning and Local Government

Newtown Road

Wexford

Your Ref: FS007029

Our Ref: 003517537-01

04 February 2020

Y35 AP90

FS007029 Foreshore Licence Consultation Response from the Sea Fisheries Protection Authority

Dear

Thank you for providing the response from the Sea Fisheries Protection Authority (SFPA) dated 21 January 2020.

I note that SFPA have no comment on the works proposed.



Our Ref: 003517742-01

Foreshore Section,

Department of Housing, Planning and Local Court

Department of Housing, Planning and Local Government

Newtown Road

Wexford

Y35 AP90

05 January 2020

FS007029 Foreshore Licence Consultation Response from Cllr Mitchell

Dear

Thank you for forwarding the response from Cllr Mitchell in response to the consultation regarding Foreshore Licence application (FS007029).

We note Cllr Mitchell's comments regarding the 2009 Foreshore Lease Applications for a wind farm on the Kish and Bray Banks, reference FS6462 and FS6463 which have not yet been determined.

The purpose of the current Foreshore Licence application is for permission to undertake site investigations and environmental surveys only; it is not for permission to construct a wind farm. The site investigations and surveys will inform the environmental assessments and preliminary engineering design to assist innogy in bringing forward a project which delivers the lowest cost of energy to the consumer.

We are planning a comprehensive stakeholder and community engagement programme for later this year to ensure everyone has a chance to talk to us about the proposed wind farm in advance of updating and submitting our development consent application.

