

FS006859 DP Energy - Inis Ealga Energy Marine Park Ltd.

Prescribed Body Observations from Consultation (10 November 2022 - 9 December 2022)

Under Regulation 42(6) of the European Communities (Birds and Natural Habitats)
Regulations 2011

1. DAFM
2. National Parks and Wildlife Service
3. Underwater Archaeological Unit
4. Marine Institute
5. Sea Fisheries Protection Authority (SFPA)
6. Inland Fisheries Ireland (IFI)
7. Marine Survey Office (MSO)
8. Marine Advisor – Environment (Dept. of Housing Planning and Local Gov.)
9. Commissioner for Irish Lights
10. Cork County Council
11. Geological Survey of Ireland (GSI)
12. Marine Advisor – Engineering (Dept. of Housing Planning and Local Gov.)

**Re: Our Ref: FW.8.97 Inis Ealga Marine Energy Park (IEMEP) ORE SI Cable
Route off Cork-Appropriate Assessment Required
DHLGH Ref: FS006859**

Dear [REDACTED],

This Department has no further comments/observations on this application for Inis Ealga Marine Energy Park.

Regards,

[REDACTED]
Foreshore Section
Department of Agriculture, Food and the Marine
National Seafood Centre, Clogheen,
Clonakilty, Co. Cork,
P85 TX47
Tel: +353 (023) 8859565
Email: [REDACTED]@agriculture.gov.ie
www.agriculture.gov.ie

Thu 08/12/2022 10:55

Housing Fem Dau Fem.Dau@npws.gov.ie

RE: FS006859 - Inis Ealga Marine Energy Park Ltd.

To: [REDACTED] (Housing) [REDACTED]@housing.gov.ie

CC: [REDACTED] (Housing) [REDACTED]@housing.gov.ie [REDACTED] (Housing)

<[REDACTED]@housing.gov.ie>

Good morning [REDACTED]

NPWS have advised that their previous obs on this case still stand and they have no additional comment

I have sent a reminder to The Department's Underwater Archaeology Unit for their obs, will revert with same as soon as they are received

Regards

[REDACTED]

[REDACTED]

Executive Officer

—

Aonad na nIarratas ar Fhorbairt

Development Applications Unit

An Roinn Tithíochta, Rialtais Áitiúil agus Oidhreachta

Department of Housing, Local Government and Heritage

Oifigí an Rialtais

Government Offices

Bóthar an Bhaile Nua, Loch Garman, Contae Loch Garman, Y35 AP90

Newtown Road, Wexford, County Wexford, Y35 AP90

—

www.tithiocht.gov.ie

www.housing.gov.ie

Fri 09/12/2022 08:43

Housing Fem Dau Fem.Dau@npws.gov.ie

RE: FS006859 - Inis Ealga Marine Energy Park Ltd.

To [REDACTED] (Housing) <[REDACTED]@housing.gov.ie>

CC [REDACTED] (Housing) <[REDACTED]@housing.gov.ie> [REDACTED] (Housing)

[REDACTED]@housing.gov.ie

Hi [REDACTED]

Further to yesterday's email in this regard please be advised that UAU have no additional comments to add to their previous submission.

Regards

[REDACTED]

[REDACTED]

Executive Officer

—

Aonad na nIarratas ar Fhorbairt

Development Applications Unit

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Newtown Road, Wexford, County Wexford, Y35 AP90

—

www.tithiocht.gov.ie

www.housing.gov.ie

From: [REDACTED] <[REDACTED]@Marine.ie>
Sent: Wednesday 14 December 2022 17:24
To: [REDACTED] (Housing) [REDACTED]@housing.gov.ie>
Cc: Housing ForeShoreORE <foreshoreORE@housing.gov.ie>
Subject: RE: FS006859 - Inis Ealga Marine Energy Park Ltd.

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Dear [REDACTED],

In our previous submission (dated 27/05/2020), the Marine Institute considered that the activities, as proposed, were unlikely to have a significant impact on the environment and identified a number of conditions that may apply to a licence. We still hold this view.

It is the view of the MI that during assessment of likely effects, however, that the licencing body consider the in-combination effects on species (marine mammals and birds, in particular) that the proposed surveying activities may have with other similar activities likely to occur in the vicinity. Furthermore, we would consider that wider effects on habitats (outside of licenced area) also be assessed. In particular, it is our view that such ORE data gathering surveys be carried out in a co-ordinated fashion in order to avoid redundancy of effort and minimise disturbance while also broadening the baseline of information on habitats and species. In addition, having this baseline data will facilitate future assessment of impacts of OREs beyond the footprint of the licence/lease area.

While it appears that the proposed site investigation area does not contain any licenced aquaculture areas it would be advised to confirm this, at the time of assessment, by referring to the Aquaculture viewer at <https://dafm-maps.marine.ie/aquaculture-viewer/>

In relation to cumulative effects with other activities, we draw the Department's attention to Natura assessments to consider interactions between Natura qualifying interests and aquaculture operations (existing and proposed) that have been carried out nationally and more specifically, in areas adjacent to the proposed application area. These reports can be found at the following link and give an indication of likely aquaculture activities occurring in the general area.

[Cork and Waterford Aquaculture AA reports pre-2020](#)

Furthermore, we draw the Department's attention to fishery risk assessments relating to Natura Qualifying interests that have been carried out nationally and more specifically, on the south and west coasts. These reports can be found at the following link and give an indication of likely fisheries activities occurring in the area in question.

<http://www.fishingnet.ie/sea-fisheriesinnaturaareas/concludedassessments/southandwestcoasts/>

Please do not hesitate to contact me if you have any queries.

All the best

[REDACTED]

[REDACTED] *PhD*
Section Manager – Licensing and Policy Advice
Marine Environment and Food Safety Services
Marine Institute
Rinville, Oranmore

*Galway, Ireland
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Aquaculture & Foreshore Application Observations

Application No: FS006859	Applicant Name & Area:
Main application and additional proposed cable route at Youghal Bay	Inis Ealga Marine Park (DP Energy Ireland)
Application Category Seafood Offshore Renewable Energy. Wind and Wave Site Investigations off the County Cork coast. Total applied area 98,960 hectares Proposed output 1000 MW	

Sea Fisheries Protection Officer Observations

- Possible impacts, if any, on existing wild fisheries in the area, with an emphasis on the possible implications for the SFPA conducting official controls and possible non-compliance issues that could arise.*

The applied area is in the fishing area known as the Celtic Sea. ICES Sub Area VIIG. Statistical rectangles 32E1 and 32E2. The application includes intertidal areas (exports cable corridors) and sub-tidal areas (wind and wave farm) in the less than 100m depth range.

The proposed applications are within recognised spawning and nursery areas for *Gadidae*, *Clupeidae*, *Scombridae* and *Scophthalmidae* species.

Commercial fishing within the applied areas targets Demersal, Pelagic and Shellfish species. In addition to the species mentioned above, inshore fishing for *Sprattus sprattus* occurs on an annual basis within the inshore areas of the application.

Mussel seed fishing has occurred within the inshore areas of the applied area in previous years. The fishing activity for this species is dependant on the availability of suitable seed in Cork Harbour and Youghal Bay.

The site investigations may cause spatial squeeze for both the inshore and offshore sectors of the fishing industry as access restrictions will be in place when the survey is underway

It is not envisaged that the site investigations will cause difficulties with conducting official controls for the SFPA within the applied area.

- Impacts, if any, on shellfish growing areas adjacent to or within the area and the possible impact on the ability of the SFPA to conduct official controls and possible non-compliance issues that could arise.*



There are three Shellfish growing areas within or adjacent to the applied area. Dungarvan Bay, Ballymacoda Bay and Cork Harbour.

The main risk to the shellfish within the three growing areas is from contamination from a pollution event from the survey platforms.

The ability to conduct official controls within the applied area will be dependant on the response time from the applicant to the SFPA Clonakilty Port Office and SFPA Dunmore East Office should a pollution event occur.

3. *Possible impacts, if any, on seafood safety.*

The site investigations for the proposed cable route corridors will use survey platforms in the form of vessels and barges. Contamination from a pollution spill is the main concern for the filter feeding shellfish grown in the three areas already mentioned. Effective communication between the applicant and its contracted parties with the SFPA should a pollution event occur can reduce the risk of potentially contaminated shellfish being placed on the market for consumption.

The application crosses two SFPA Port areas, SFPA Clonakilty Port and SFPA Dunmore East. Additionally from a National perspective, the Food Safety and Fisheries Support Unit of SFPA headquarters coordinates all communications on risk to both SFPA port officers and seafood producers.

Contact details for SFPA Offices within the applied area.

- Dunmore East Port Office; Dunmore@sfpa.ie +353 51 383135
- Clonakilty Port Office; sfpa_clonakilty_port@sfpa.ie +353 23 8859300
- Clonakilty Food Safety & Fisheries Support; sfpafood&fisheriessupport@sfpa.ie +353 23 8859300

Sea-Fisheries Protection Authority

Date: 6-1-2023

Wed 07/12/2022 13:02

From: [REDACTED] <[REDACTED]@fisheriesireland.ie>

RE: FS006859 - Inis Ealga Marine Energy Park Ltd.

To: [REDACTED] (Housing) [REDACTED]@housing.gov.ie

CC [REDACTED] (Housing) <[REDACTED]@housing.gov.ie> [REDACTED] (Housing)

<[REDACTED]@housing.gov.ie>

Hi [REDACTED]

In response to the application it is noted that there is a likelihood of significant effects on Twaite shad. There are a number of mitigation measures that can be put in place to reduce this risk including the soft start and ramp up protocol for noise generating surveys.

Kind regards

[REDACTED]

[REDACTED]

Senior Research Officer

From: [REDACTED] (Transport)
Sent: Monday 14 November 2022 12:59
To: [REDACTED] (Housing)
Cc: Housing ForeShoreORE
Subject: Foreshore Application (FS006859) - Inis Ealga Marine Energy Park Ltd.

Good day [REDACTED]

It is noted that FS0006859 and FS 007404 have been submitted by the same operator with 'similar licence application' areas. I hope the process is not been duplicated unnecessarily.

After careful consideration the Marine Survey Office has no objection to the above referenced application from a navigational safety perspective.

However the following points shall be of note;

1. The Licensee shall, through consultation and agreement with the Department of Transport, Marine Survey Office and Commissioners of Irish Lights, arrange for the publication of a Marine Notice through the Maritime Safety Policy Division. The frequency and promulgation of Navtex and radio broadcast warnings shall be agreed in advance with the Irish Coast Guard for the duration of the license period.
2. The marking and lighting of moored instruments shall be carried out in consultation with the Marine Survey Office and Commissioners of Irish Lights. Lighting and marking shall be compliant with International Association of Aids to Navigation (IALA) requirements. Information regarding the position of any markings which create a hazard to navigation shall be promulgated to the mariner via publication of a marine notice and all available means appropriate.
3. The Licensee shall ensure all appropriate measures are taken for the duration of any on-site activity to ensure the safety of navigation is maintained. Any hazard to safe navigation shall be easily identifiable to all mariners operating within or in the vicinity of the license area.

Regards,

Capt. [REDACTED]
*Marine Survey Office
Nautical Surveyor*

An Roinn Iompair
Department of Transport

Lána Líosain, Baile Átha Cliath, D02 TR60
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Office + 353 1604 1604
Mobile + [REDACTED]

[REDACTED]@transport.gov.ie
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██████████
Foreshore Unit,
Department of the Housing, Local Government and Heritage,
Newtown Road, Co. Wexford
9th December 2022

Prescribed Bodies Consultation - Environmental Report

Re: FS006859 Inis Ealga Marine Energy Park Ltd. for site investigation surveys off the coast of counties Cork and Waterford.

Applicant: Inis Ealga Marine Energy Park Ltd.

Dear ██████████

Your email of the 8th of November 2022 refers to this licence application for site investigation surveys off the coast of counties Cork and Waterford.

This coastline between Cork Harbour and Dungarvan Harbour is of high ornithological importance. Its estuaries and bays support both nationally and internationally important populations of wintering birds, including Light-bellied Brent Goose and Black-tailed Godwit. The Blackwater Estuary provides good quality feeding areas for a diversity of waterfowl species and Dungarvan Harbour is of international importance because it regularly supports an assemblage of over 20,000 wintering waterbirds. The coastline between Helvick Head and Ballyquin supports a range of breeding seabirds, including populations of Cormorant, Herring Gull and Kittiwake of national importance. A nationally important breeding population of the Annex I species Chough is also occurs here.

Assessment Process

The Minister for Housing, Local Government and Heritage is responsible for carrying out environmental screening and any environmental assessments determined as being required following screening, in accordance with the requirements set out in Directive 92/43/EEC (**Habitats Directive**) and Directive 2009/147/EC (**Birds Directive**), in respect of applications under the The Foreshore Act 1933, as amended.

Habitats Directive

The Appropriate Assessment process (AA) is an assessment of the potential for adverse or negative effects of a plan or project, in combination with other plans or projects, on the conservation objectives of a European Site (Natura 2000 site). The focus of AA is targeted specifically on Natura 2000 sites and their conservation objectives.

Article 6(3) and 6(4) of the **Habitats Directive** place strict legal obligations on Member States to regulate the conditions under which development that has the potential to impact on European Sites can be proceed. It requires that an Appropriate Assessment be carried out of plans or projects, not directly connected with or necessary to the management of a site as a European Site, but which are likely to have a significant effect thereon, either individually or



in combination with other plans or projects. An AA Screening assessment is carried out to determine whether a plan or project is likely to have a significant effect on a European Site.

- Article 6.3 states that: *“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”*
- Article 6.4 states: *“if, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

In giving effect to the above as a matter of Irish law, the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011, as amended) (**Birds and Natural Habitats Regulations**) provide as follows:-

Regulation 42(1) of the Birds and Natural Habitats Regulations states that: *“A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site”.*

Regulation 42(2) provides that: *“A public authority shall carry out screening for Appropriate Assessment under paragraph (1) before consenting for a plan or project is given, or a decision to undertake or adopt a plan or project is taken”.*

The Birds and Natural Habitats Regulations further provide as follows at Regulation 42 (6) and 42 (7):-

6. The public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site.

7. The public authority shall determine that an Appropriate Assessment of a plan or project is not required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it can be excluded



on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site.

Furthermore, under section 42A (13) of S.I. No. 293 of 2021 an Appropriate Assessment, including the specified public consultation, must be carried out before the public authority makes a decision to undertake or adopt the proposed plan or project.

Risk Assessment for Annex IV Species

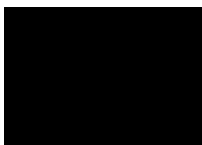
Article 12 of the Habitats Directive (92/43/EEC) affords strict protection to species listed in Annex IV of the Directive wherever they occur. Outside of designated Natura 2000 sites, the waters around Ireland's coast are a suitable habitat for a number of Annex IV species. Where necessary a Risk Assessment for adverse effects of the proposed works on these species must be undertaken and a report produced.

The purpose of the Risk Assessment is to examine the possibility that the proposed project either individually or in combination with other plans and projects, may result in the deliberate disturbance or destruction of any of the species listed in Annex IV which may be present in the works area. The Risk Assessment should take into account the status (e.g. as indicated in the latest Article 17 reporting for Ireland, NPWS 2019) and sensitivities of relevant Annex IV species to potential impacts associated with the proposed project.

The Risk Assessment for Annex IV Species should be precise, with definite findings, mitigation and conclusions removing all reasonable scientific doubt as to the effects of the proposed project on any Annex IV species. This assessment is separate to that undertaken under Article 6.3.

Conclusion/Recommendation

In principle I have no objections to this application. On completion of the Public and Prescribed Bodies' Consultation I will furnish my final report with determinations. This may include case specific conditions having regard to the information obtained during consultation.



Marine Advisor, Environment.



Commissioners of
IRISH LIGHTS | Navigation
and Maritime
Services

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22 November 2022

Minister for Housing,
Local Government and Heritage,
Foreshore Section,
Department of Housing,
Local Government and Heritage,
Newtown Road,
Wexford,
Y35 AP90

Consultation Foreshore application FS006859 DP Energy Site Investigations at Inis Eagla

To whom it may concern,

Thank you for contacting the Commissioners of Irish Lights requesting observations on this foreshore licence application FS006859, dated 08th November 2022.

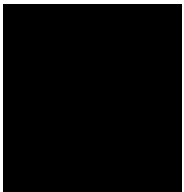
Irish Lights notes from the application that there will be a number of Aids to Navigation (AtoN) deployed: Wave buoys, Lidar buoys and Acoustic Doppler Current Profilers. Before any aid to navigation can be established, altered or disestablished, consent in the form of Statutory Sanction under the Merchant Shipping Act must be obtained from the Commissioners of Irish Lights. The aid must be coloured and marked as per IALA (International Association of Marine Aids to Navigation and Lighthouse Authorities) Standards.

The foreshore license sought is located between Cork and Dungarvan which is a high traffic density area. Irish Lights therefore, advise consultation with local authorities and the Marine Survey Office (MSO). A Marine Notice should be published for the information of all local maritime users detailing the works and any vessels which may be engaged in Site Investigation works.

Within the proposed Investigative Foreshore Licence Application area, there are a number of aids to Navigation. Commissioners of Irish Lights request mariners navigating around the coast of Ireland to exercise the greatest care to avoid damage to Aids to Navigation. Mariners should give all Aids to Navigation a wide berth, paying particular attention to the strength of wind and tide.

If you have any queries, please do not hesitate to contact myself or a member of the team.

Yours sincerely,



Acting Navigation Services Manager

Comhairle Contae Chorcaí Cork County Council

An Rannóg Pleanála,
Halla an Chontae,
Bóthar Charráig Ruacháin,
Corcaigh T12 R2NC.
Fóna (021) 4276891 • Faisc (021) 4276321
R-phost planninginfo@corkcoco.ie
Suíomh Gréasáil www.corkcoco.ie
Planning Department,
County Hall,
Carrigrohane Road, Cork T12 R2NC.
Tel (021) 4276891 • Fax (021) 4276321
Email: planninginfo@corkcoco.ie
Web: www.corkcoco.ie



Project Description: Inis Ealga Marine Energy Park (IEMEP) previously submitted a Foreshore License Application (Reference: FS006859) for the proposed Inis Ealga Marine Energy Park and export cable corridors in December 2019, which remains to be determined. This additional application relates to a further export cable corridor connecting the Array Investigation Area with a landfall located between Clonard and Ballymacoda, Co. Cork

The investigations are aimed at gathering sufficient geophysical, geotechnical, environmental, archaeological and ecological information to assess suitability for cable routing and other electrical infrastructure associated with the Site. The results of these surveys will also provide baseline data for environmental appraisal, Environmental Impact Assessment and subsequent Environmental Impact Assessment Report (EIAR).

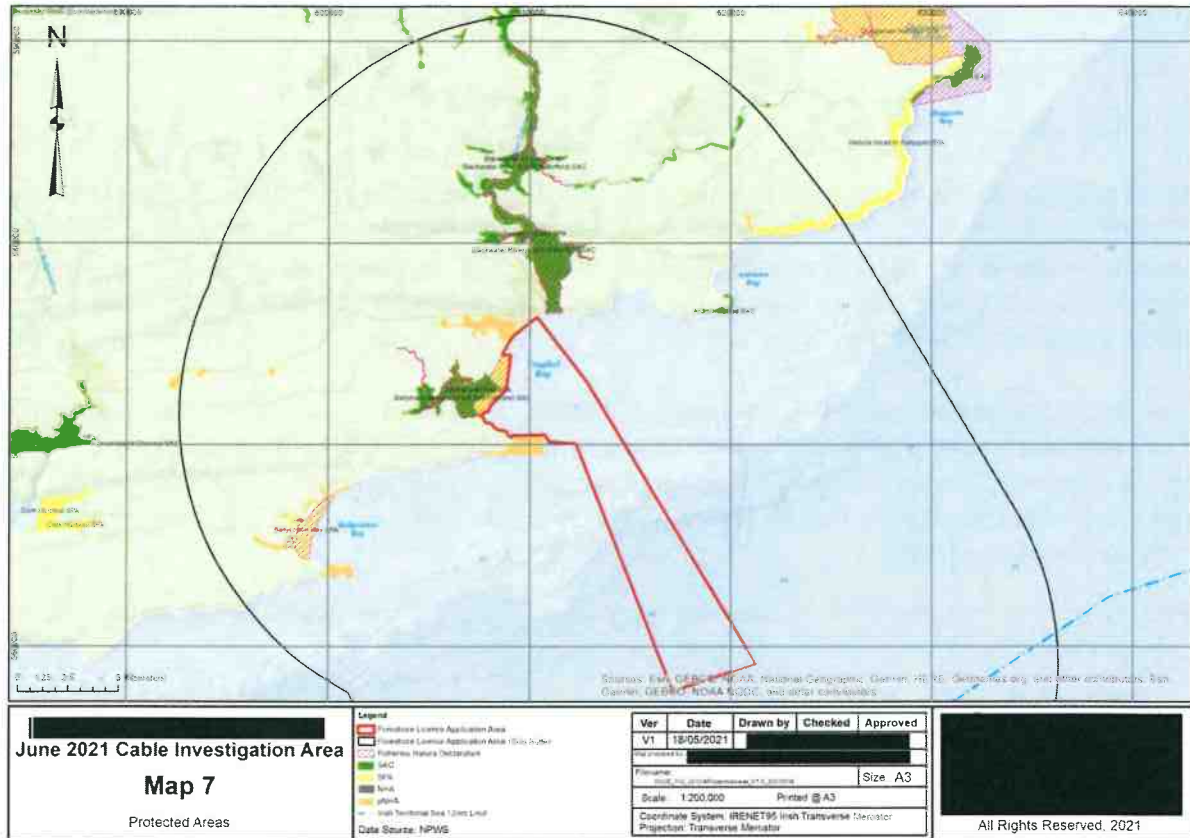
Proposed Site Investigation Works will comply with international and national statute and will include the following:

- Geophysical survey is to determine the geophysical characteristics of the Foreshore Licence Application Area (FLAA). It will include mapping of seabed, identifying marine habitats, inform marine archaeological assessment;
- Geotechnical survey to evaluate the nature and mechanical properties of the superficial seabed sediments and intertidal sediments within the FLAA Wind Resource Monitoring. Survey methods will include Vibrocores to retrieve soil samples, Cone Penetration Test (CPT) to test the characteristic of the soil, and Boreholes;
- Environmental Surveys to inform mapping of the distribution and extent of marine benthic habitats across the FLAA, including within the intertidal area;
- Birds & Marine Mammals Surveys will provide data to supplement the 24-month aerial bird and marine mammal survey effort currently underway as required. The aerial bird and marine mammal survey effort underway is currently recording the distribution and abundance of birds, marine mammals and other species observed in the FLAA. Methodology will include boat based bird and marine mammal surveys potentially including towed hydrophonic acoustic array. Potential deployment of Passive Acoustic Monitor(s). Potential deployment of Static Acoustic Monitor(s). Scope to be determined following engagement with statutory and non-statutory stakeholders on Year 2 of survey effort pending results from Year 1 of aerial bird and marine mammal survey effort.:
- Wind Resource and Metocean Survey will evaluate wind, wave and tidal conditions within the FLAA. It will include the deployment of approximately two acoustic doppler current profilers (ADCP) and approximately two Waverider buoys. The ADCPs will be deployed via a vessel on-board

crane and will sit on the seabed. The Waverider buoys are typically yellow in colour and include an amber LED with a programable ODAS flash sequence with three nautical mile visibility.

Site Context: The proposed site investigation works is for a potential export cable corridor connecting the Array Investigation Area with a landfall between Clonard and Ballymacoda, Co. Cork. The Foreshore Licence Application Area (FLAA) covers 6,492ha (Figure 1)

Figure 1 - Location of Foreshore Licence Application Area



Summary of documentation in relation to Appropriate Assessment (available for viewing at [Foreshore notice on Gov.ie](https://www.gov.ie/en/foreshore-notice))

- A Natura Impact Statement was included with the application documents available for viewing on the [Foreshore notice on Gov.ie](https://www.gov.ie/en/foreshore-notice). The NIS (dated December 2019), prepared by Intertek Energy & Water Consultancy Services, does not relate to this project specifically, but rather it focusses on FLA FS006859. This project (FS007404) relates to the option of an additional export cable corridor connecting the Array Investigation Area (FLA FS006859) with a landfall located between Clonard and Ballymacoda.
- The Environmental Supporting Information document (dated July 2021) included a Screening for Appropriate Assessment Report prepared by Intertek Energy & Water Consultancy Services. The Report concluded that the proposed site investigation works will not have a likely significant effect either alone or in combination with other plans and projects and will not undermine the conservation objectives of any SAC or SPA.
- A Screening for Appropriate Assessment Submission (dated July 2022), prepared by an Independent Environmental Consultant (Hartley Anderson Ltd.) concluded that likely significant effects on Twaite Shad, a qualifying interest of the Blackwater River

(Cork/Waterford) SAC could not be ruled out with respect to underwater noise changes associated with the proposed site investigation and that Appropriate Assessment is required.

- In the Screening for Appropriate Assessment Determination (dated October 2022), the Department of Housing, Local Government and Heritage made a determination that an Appropriate Assessment is required as the project, individually or in combination with other plans or projects, is likely to have a significant effect on European sites. The Screening Determination for Appropriate Assessment was signed by the Minister of State for Local Government and Planning and by the Recommending Officer - Marine Advisor Environment.
- Responses to queries, raised by the IEC, were made by Intertek and documented in the Explanatory Note that was also included in the documentation of the Foreshore Notice.
- Although not AA related, a risk assessment for Annex IV species (July 2022), prepared by Hartley Anderson Ltd, is included for viewing on Gov.ie. It included responses to relevant consultation submitted. The assessment concluded that with the implementation of measures set out in Section 4.3.4 (ii) of the Guidance to Manage the Risk to Marine Mammals from Man-made sound sources in Irish Waters (DAHG 2014): It is very unlikely that there will be negative residual impacts from the proposed site investigations on Annex IV species in the area; It is very unlikely that any Annex IV species will be injured or killed as a result of the proposed site investigations; Annex IV species using the area are likely to be tolerant of vessel noise and any animals which might be displaced from the vicinity of the survey vessels can be expected to quickly re-establish use of the area following cessation of the works.

Environmental Supporting Information

This document outlines the proposed investigation works, the environmental sensitivities and the potential environmental effects of the works.

Environmental sensitivities include:

- *Protected Sites*, more specifically, European Sites. Seven European sites are within 15km of the proposed works, namely Ardmore Head SAC, Ballycotton Bay SPA, Ballymacoda Bay SPA, Ballymacoda (Clonpriest and Pillmore) SAC, Blackwater Estuary SPA, Blackwater River (Cork/Waterford) SAC, and Helvick Head to Ballyquin SPA. Eight other European sites which have a marine component have been screened for AA to ensure that the potential for intra-project cumulative effects have been appropriately assessed. They include Comeragh Mountains SAC, Glendine Wood SAC, Helvick Head SAC, Sovereign Islands SPA, Cork Harbour SPA, Dungarvan Harbour SPA, Mid-Waterford Coast SPA and Sovereign Islands SPA.
 - Potential impacts were considered in the AA Screening Report attached the document.
- *Intertidal and Benthic Communities* include the habitats and species (flora and fauna) present in, on or closely associated with the seabed.
 - Potential impacts include penetration and/or disturbance of the substrate. It was considered that the sedimentary benthic habitats identified within the FLAA are widespread and common for the region. Therefore, any disturbance is not expected to have an effect on the wider population of benthic fauna and the significance of any effect will be Imperceptible for sedimentary habitats.

- Potential impacts due to visual disturbance, underwater sound changes, and penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion were considered in the AA Screening Report attached to the document.
- *Fish and Shellfish species* within the ZOI of the proposed works include the qualifying interest species of the Blackwater River SAC (i.e. Atlantic salmon, sea lamprey, river lamprey and twaite shad), commercially important fish species (e.g. Atlantic cod, European hake, Atlantic herring, Atlantic mackerel, whiting, haddock and horse mackerel) and important populations of scallop, lobster, Nephrops, crabs, scallops, razor clams and whelks.
 - There is potential for underwater sound changes to impact on fish. Potential impacts on Twaite shad, a QI for the Blackwater River (Cork/Waterford) SAC, were considered in the AA Screening Report attached to the document.
- *Bird species* associated with sea cliffs, estuaries, off-shore islands were accounted for, including migratory species connected to the SPAs within the FLAA and Capel Island and Knockadoon Nature Reserve.
 - Potential visual disturbance impacts were considered in the AA Screening Report attached to the document.
- *Marine Mammals* known to occur within the FLAA include ten species of cetaceans and two species of seal. European otter also occurs within the nearshore area.
 - Potential sound, collision and visual disturbance impacts were considered in the AA Screening Report attached to the document.
- Other sensitivities include shipping and navigation, commercial fishing, infrastructure, recreation, and shipwrecks.
 - The document outlines specific measures to mitigate against the potential impacts that the investigation works would have on the marine activity, recreational resources, archaeology and waste management. These include the appointment of Fisheries Liaison Officers and compliance with COLREGS.

Screening for Appropriate Assessment

The screening report (July 2021), prepared by Intertek Energy & Water Consultancy Services, provides a detailed overview of the proposed site investigation and baseline survey work. A total of 18 Natura 2000 sites and associated qualifying interests and special conservation interest species were screened in.

Due to the significant distance of the study site to the SPAs designated for breeding birds, significant visual disturbances on breeding birds were screened out. As the investigations are proposed to take place during summer months, the report screened out impacts to overwintering birds and their SPAs. The potential impacts to Annex II marine mammals were screened out due to distance and absence of evidence that such surveys would lead to injury.

The screening report outlines how Twaite shad are sensitive to noise changes and are potentially vulnerable to the proposed surveys. The report asserts that given the nature of the survey works, which includes slow transition of the FLAA, most hearing sensitive fish species, including twaite shad will demonstrate temporary avoidance behaviour from early on and remain outside the zone of

influence for the duration of the operation and that there will be no long term displacements or disturbance. The applicant states that as the noise generated by impulsive sound (>1kHz) will be above the with optimum sensitivity between 300Hz-1kHz (Nedwell et al. 2007), twaite shad will not be significantly affected.

The Screening report concluded that the proposed site investigation works will not have a likely significant effect either alone or in combination with other plans and projects and will not undermine the conservation objectives of any SAC or SPA.

Independent Ecological Consultation (IEC) - Screening for Appropriate Assessment

The screening report (July 2022), prepared by Hartley Anderson Ltd., outlines the proposed survey and investigation works, describes the methodology and identifies and assesses the potential risk to Natura 2000 sites in terms of their conservation objectives. The report concurred with the applicant's (and Intertek's), identification of the major potential sources of effects from the proposed site investigations that could affect qualifying interests of Natura 2000 sites. The IEC also considers that applicant has used an evidence-based approach to defining the Zone of Influence of the project to enable the selection of relevant sites and concurred that the distance-based criteria are suitably precautionary to ensure that those qualifying interests most likely to be affected by the proposals have been identified for consideration in the screening.

The IEC did not agree with the applicant's assertion that the proposed survey works would not lead to likely significant effects on twaite shad due to underwater sound changes. The Independent Ecological Consultants cite Teague & Clough (2011) and state that a preliminary exposure trial of twaite shad eliciting significant reactions at sound frequencies of between 30 and 60kHz and can detect ultrasound at frequencies up to 180kHz. As this frequency is above the 1kHz (Nedwell *et al.* 2007) cited in the applicant's screening report and the potential overlap with frequencies produced primarily by the Multi-Beam Echo-Sounder (MBES) and Sub-Bottom Profiler (SBP) equipment, it was consider that there is potential for LSE with respect to impulsive underwater noise and the twaite shad feature of the Blackwater River (Cork/Waterford) SAC given that twaite shad are likely to be found in coastal areas of the FLAA all year round, with the greatest density likely to be observed during the May-July migration which may overlap with the survey.

As such, based on the studies cited and information submitted by Inland Fisheries Ireland (regarding spawning information on twaite shad) LSE on twaite shad could not be ruled out and Stage 2 Appropriate Assessment was deemed to be required.

Cork County Council Comments and Observations

The documents provided for viewing in the [Foreshore Notice](#) have been reviewed and the following are comment and observations made by the Ecology Unit in Cork County Council:

It is acknowledged that the Foreshore Licence Application Area will be in relatively close proximity (<2km) to a number of European sites within the operational area of Cork County Council, namely Ballymacoda Bay SPA (site code 4023), Ballymacoda (Clonpriest and Pillmore) SAC (site code: 0077), Blackwater River (Cork/Waterford) SAC (site code: 2170) and Blackwater Estuary SPA (site code: 4028).

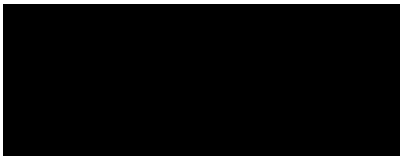
Regarding the Ballymacoda Bay SPA and Blackwater Estuary SPA and in the interest of clarity, we suggest that the reasons for choosing the times of year that the surveys are conducted be given. This would avoid any ambiguity that may arise as it could be argued that timing of investigations is to avoid the period when peak numbers of wetland birds are present is mitigation.

The Environmental Supporting Information document only considered the impacts to breeding birds which are special conservation interests of SPA. Capel Island and Knockadoon Head pNHA supports breeding populations of a number of seabird species including Cormorant, Herring Gull, Fulmar, and Great Black-backed Gull and cliff nesting birds, Chough and Peregrine. We consider that potential impacts to the breeding population within and in the vicinity of the pNHA should be taken into account.

We agree that given the nature of the proposed works, there will be no impact to the integrity of Ballymacoda (Clonpriest and Pillmore) SAC.

Regarding the Blackwater River (Cork/Waterford) SAC, it is noted that the IEC has concluded that there is potential for likely significant effects on twaite shad (a qualifying interest of the SAC) caused by underwater sound changes created during the survey work and that Stage 2 Appropriate Assessment is required.

Cork County Council does not have the relevant expertise to comment on the impacts caused to marine ecology by geophysical and geotechnical surveys. We note and are satisfied that other ecological matters have been addressed and that there are no outstanding issues for other ecological receptors, and therefore have no further comment to make in this regard. We note the conclusions of the IEC and the Marine Advisor and have reviewed the Screening Determination and acknowledge that the Minister for State for Local Government and Planning has signed a determination that an Appropriate Assessment is required. The Ecology Unit of Cork County Council will review the Natura Impact Statement and provide input and observations when it is published.



Assistance Ecologist
Cork County Council

07/12/2022



Foreshore Section
Department of Housing, Local Government and Heritage
Newtown Road
Wexford

06 December 2022

Re: Inis Ealga Marine Energy Park Foreshore Licence Applications
Your Ref: FS006859, FS007404
Our Ref: 22/466 [c.f. 22/313 response to ██████████]

Dear Sir/Madam,

Geological Survey Ireland is the national earth science agency and is a division of the Department of the Environment, Climate and Communications. We provide independent geological information and advice and gather various data for that purpose. Please see our [website](#) for data availability. We recommend using these various data sets, when conducting the EIAR, SEA, planning and scoping processes. Use of our data or maps should be attributed correctly to 'Geological Survey Ireland'.

With reference to your email received on the 10 November 2022, concerning the Inis Ealga Marine Energy Park Foreshore Licence Applications, Geological Survey Ireland would encourage use of and reference to our datasets. Please find attached a list of our publicly available datasets that may be useful to the environmental assessment and planning process. We recommend that you review this list and refer to any datasets you consider relevant to your assessment. The remainder of this letter and following sections provide more detail on some of these datasets.

Geoheritage

Geological Survey Ireland is in partnership with the National Parks and Wildlife Service (NPWS, Department of Housing, Local Government and Heritage), to identify and select important geological and geomorphological sites throughout the country for designation as geological NHAs (Natural Heritage Areas). This is addressed by the Geoheritage Programme of Geological Survey Ireland, under 16 different geological themes, in which the minimum number of scientifically significant sites that best represent the theme are rigorously selected by a panel of theme experts.

County Geological Sites (CGSs), as adopted under the National Heritage Plan, include additional sites that may also be of national importance, but which were not selected as the very best examples for NHA designation. All geological heritage sites identified by Geological Survey Ireland are categorised as CGS pending any further NHA designation by NPWS. CGSs are now routinely included in County Development Plans and in the GIS of planning departments, to ensure the recognition and appropriate protection of geological heritage within the planning system. CGSs can be viewed online under the Geological Heritage tab on the online [Map Viewer](#).

The audit for Co. Cork commenced in 2021, and will be a three-year process. However, the sites are listed in a master list of unaudited sites, and can be viewed under the Geological Heritage tab on the online [Map Viewer](#) as sites with buffer zones but no specific site boundary. **Our records show that there are numerous unaudited and provisionally audited CGSs within the Foreshore Licence application area. Unaudited sites include:**

Corkbeg Island, Co. Cork. (GR 182610, 64000), under IGH theme: IGH 8 Lower Carboniferous.

Lough Beg Section, Co. Cork. (GR 178000, 63000), under IGH theme: IGH 8 Lower Carboniferous.

Cork Harbour, Co. Cork. (GR 181000, 61000), under IGH theme: IGH 13 Coastal Geomorphology.

Ringabella Section - Fountainstown - Myrtleville - Rams Head, Co. Cork. (GR179000, 59000), under IGH theme: IGH 8 Lower Carboniferous.

Ringabella Bay and Point, Co. Cork. (GR 179000, 58000), under IGH theme: IGH 7 Quaternary.

Fountaintown Creek to Ringabella Beach, Co. Cork. (GR 178500, 58000), under IGH theme: IGH 3 Carboniferous to Pliocene Palaeontology.



Provisional 'audited' data for the following sites available upon request:

Youghal (under light-house), Co. Cork. (GR 210900, 76700), under IGH theme: IGH 10 Devonian.

Knockadoon Head, Co. Cork. (GR 209300, 70000), under IGH theme: IGH 7 Quaternary.

Ballycotton Bay, Co. Cork. (GR 199000, 65000), under IGH theme: IGH 7 Quaternary.

Ballycotton, Co. Cork. (GR 198500, 63000), under IGH theme: IGH 10 Devonian.

Ballycroneen Bay, Co. Cork. (GR 190600, 61000), under IGH theme: IGH 7 Quaternary.

White Bay - Roche's point - Gyleen, Co. Cork. (GR 183000, 61000), under IGH theme: IGH 10 Devonian.

Ringaskiddy, Golden Rock, Co. Cork. (GR 179000, 64000), under IGH theme: IGH 8 Lower Carboniferous.

The audit for Co. Waterford was completed in 2012. The full report details can be found [here](#). **Our records show that there are CGSs within the Foreshore Licence application area.**

Whiting Bay and Goat Island, Co. Waterford (GR 215356, 77407), under IGH themes: IGH8 Lower Carboniferous, IGH7 Quaternary, IGH15 Economic Geology. A varied sequence of early Carboniferous aged sedimentary rocks, and Quaternary (Ice Age) tills. Link to Site Report: [WD005](#).

Ardoginna, Co. Waterford (GR 217399, 76437), under IGH themes: IGH 13 Coastal Geomorphology, IGH 10 Devonian. Ardoginna is a coastal cliff and geo (long narrow inlet). Three geos, or long narrow inlets in the coast, with steep sides and an exposure of a monocline. Link to Site Report: [WD002](#).

Ardmore Mine, Co. Waterford (GR 220104, 77243), under IGH theme: IGH15 Economic Geology. A complex of small mined tunnels penetrate the lower cliff as much as 50m inland in horizontal shaft. Link to Site Report: [WD001](#).

St Declans Stone, Co. Waterford (GR 219397, 77541), under IGH theme: IGH7 Quaternary. A glacial erratic boulder, which rests on outcropping bedrock beside Ardmore pier. Link to Site Report: [WD052](#).

Ballyquin Shore, Co. Waterford (GR 221207, 80233), under IGH theme(s): A coastal section of bedrock on the foreshore, and cliffs in unconsolidated deposits. Link to Site Report: [WD009](#).

Although the Inis Ealga Marine Energy Park is in the early stages of planning, there may be potential impacts on the integrity of the current audited and unaudited CGSs envisaged by the proposed development, should these sites not be assessed as constraints. Ideally, the sites should not be damaged or integrity impacted or reduced in any manner due to the proposed development. However, this is not always possible, and in this situation appropriate mitigation measures should be put in place to minimize or mitigate potential impacts. Where the integrity cannot be preserved we would ask that careful consideration be given in design to accommodating preservation of rock and sediment exposures and access to the site during construction to record the exposures to strengthen our knowledge and datasets.

We would also ask that the design of any future development considers the use of information panels as appropriate to highlight the significance of an impacted CGS. Please contact [\[REDACTED\]@gsi.ie](mailto: [REDACTED]@gsi.ie) for further information and possible mitigation measures if applicable.

Marine and Coastal Unit

Our marine environment is hugely important to our bio-economy, transport, tourism and recreational sectors. It is also an important indicator of the health of our planet. Geological Survey Ireland's Marine and Coastal Unit in partnership with the Marine Institute, jointly manages [INFOMAR](#), Ireland's national marine mapping programme; providing key baseline data for Ireland's marine sector. The programme delivers a wide range of benefits to multi-sectoral end-users across the national blue economy with an emphasis on enabling our stakeholders. Demonstrated applications for the use of INFOMAR's suite of mapping products include Shipping & Navigation, Fisheries Management, Aquaculture, Off-shore Renewable Energies, Marine Leisure & Tourism and Coastal Behaviour.



An extensive database of shipwrecks mapped by the INFOMAR programme, may be of benefit to the Potential Turbine Array Infrastructure Zone and can be accessed at: <https://www.infomar.ie/maps/story-maps/shipwrecks>.

INFOMAR also produces a wide variety of seabed mapping products that enable public and stakeholders to visualize Ireland's seafloor environment <https://www.infomar.ie/maps/downloadable-maps/maps>. [Story maps](#) have also been developed providing a different perspective of some of the bays and harbors of the Irish coastline. We would therefore recommend use of our Marine and Coastal Unit datasets available on our [website](#) and [Map Viewer](#).

The Marine and Coastal Unit also participate in coastal change projects such as [CHERISH](#) (Climate, Heritage and Environments of Reefs, Islands, and Headlands) and are undertaking mapping in areas such as coastal vulnerability and coastal erosion. Further information on these projects can be found [here](#).

Coastal Vulnerability Index

Geological Survey Ireland is undertaking a new coastal vulnerability mapping initiative. Maps produced by this project will provide an insight into the relative susceptibility of the Irish coast to adverse impacts of sea-level rise through the use of a Coastal Vulnerability Index (CVI). Currently the project is being carried out on the east coast and will be rolled out nationally, detailed information and maps are available [here](#). These index-based maps will offer a simple, easy visual representation of sensitive areas based on robust methods and conceptualised metrics from latest research, adapted to the Irish context. This will enable coastal managers to prioritize or concentrate efforts on adaptation.

Groundwater

Geological Survey Ireland's [Groundwater and Geothermal Unit](#), provides advice, data and maps relating to groundwater distribution, quality and use, which is especially relevant for safe and secure drinking water supplies and healthy ecosystems.

Proposed developments need to consider any potential impact on specific groundwater abstractions and on groundwater resources in general. We recommend using the groundwater maps on our [Map viewer](#) which should include: wells; drinking water source protection areas; the national map suite - aquifer, groundwater vulnerability, groundwater recharge and subsoil permeability maps. **For areas underlain by limestone, please refer to the karst specific data layers (karst features, tracer test database; turlough water levels (gwlevel.ie)).** Background information is also provided in the Groundwater Body Descriptions. Please read all disclaimers carefully when using Geological Survey Ireland data.

The Groundwater Karst Data viewer indicates that there are a variety of Karst features in the vicinity of the Foreshore Licence application area., including caves, turloughs, enclosed depressions, swallow-holes, and springs. The Groundwater Resources Viewer indicates the infrastructure zone areas are underlain by several aquifers classed as a 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones', a 'Locally Important Aquifer - Karstified' and a 'Regionally Important Aquifer - Karstified (diffuse)'.

The Groundwater Vulnerability map indicates the range of groundwater vulnerabilities within the area covered is variable. We would therefore recommend use of the Groundwater Viewer to identify areas of High to Extreme Vulnerability and 'Rock at or near surface' in your assessments, as any groundwater-surface water interactions that might occur would be greatest in these areas.

[GWClimate](#) is a groundwater monitoring and modelling project that aims to investigate the impact of climate change on groundwater in Ireland. This is a follow on from a previous project (GWFlood) and the data may be useful in relation to Flood Risk Assessment (FRA) and management plans. Maps and data are available on the [Map viewer](#).

Geological Survey Ireland has completed Groundwater Protection Schemes (GWPSs) in partnership with Local Authorities, and there is now national coverage of GWPS mapping. A Groundwater Protection Scheme provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater. **The Cork Groundwater Protection Response overview and link to the main reports is here: <https://www.gsi.ie/en-ie/publications/Pages/Cork-Groundwater-Protection-Scheme-Reports.aspx>.**



Geological Mapping

Geological Survey Ireland maintains online datasets of bedrock and subsoils geological mapping that are reliable and accessible. We would encourage you to use these data which can be found [here](#), in your future assessments.

Please note we have recently launched QGIS compatible bedrock (100K) and Quaternary geology map data, with instructional manuals and videos. This makes our data more accessible to general public and external stakeholders. QGIS compatible data can be found in our downloadable bedrock 100k .zip file on the [Data & Maps](#) section of our website.

Our 3D models can help stakeholders visualize, understand and characterise geology, for deposit and resource mapping, for flooding and for urban geology applications including basement impact assessment, Sustainable Drainage Systems (SuDS), and subsurface management. Our 3D models offer a key element of geotechnical risk management by identifying areas requiring further site investigation.

Further information and download instructions for the Quaternary 3D model of Cork are available on the Geological Mapping programme dedicated [here](#) and [here](#).

Geotechnical Database Resources

Geological Survey Ireland continues to populate and develop our national geotechnical database and viewer with site investigation data submitted voluntarily by industry. The current database holding is over 7500 reports with 134,000 boreholes; 31,000 of which are digitised which can be accessed through downloads from our [Geotechnical Map Viewer](#). We would encourage the use of this database as part of any baseline geological assessment of the proposed development as it can provide invaluable baseline data for the region or vicinity of proposed development areas. This information may be beneficial and cost saving for any site-specific investigations that may be designed as part of the project.

Geohazards

Geohazards can cause widespread damage to landscapes, wildlife, human property and human life. In Ireland, landslides, flooding and coastal erosion are the most prevalent of these hazards. We recommend that geohazards be taken into consideration, especially when developing areas where these risks are prevalent, and we encourage the use of our data when doing so.

Geological Survey Ireland has information available on landslides in Ireland via the National Landslide Database and Landslide Susceptibility Map both of which are available for viewing on our dedicated [Map Viewer](#). Associated guidance documentation relating to the National Landslide Susceptibility Map is also available.

Geological Survey Ireland also engaged in a national project on Groundwater Flooding. The data from this project may be useful in relation to Flood Risk Assessment (FRA) and management plans, and is described in more detail under 'Groundwater' above.

Coastal Vulnerability while seen as a potential geohazard, is discussed in more detail under our marine and coastal unit information below.

Natural Resources (Minerals/Aggregates)

Geological Survey Ireland provides data, maps, interpretations and advice on matters related to minerals, their use and their development in our [Minerals section](#) of the website. The Active Quarries, Mineral Localities and the Aggregate Potential maps are available on our [Map Viewer](#).

We would recommend use of the Aggregate Potential Mapping viewer to identify areas of High to Very High source aggregate potential within the area. In keeping with a sustainable approach we would recommend use of our data and mapping viewers to identify and ensure that natural resources used in the proposed development are sustainably sourced from properly recognised and licensed facilities, and that consideration of future resource sterilization is considered.



Geophysical data

Geological Survey Ireland produces high-resolution geophysical data (Magnetic field, electrical conductivity, natural gamma-ray radiation) of soils & rocks as part of the [Tellus programme](#). These data currently cover approximately 75% of the country and provide supporting geological information on a regional scale useful for assessing environmental impact and risk.

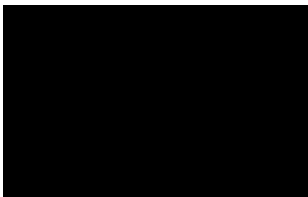
Other Comments

Should development go ahead, all other factors considered, Geological Survey Ireland would much appreciate a copy of reports detailing any site investigations carried out. Should any significant bedrock cuttings or sedimentary exposures be created, we would ask that they will be designed to remain visible as exposures rather than covered with soil and vegetated, in accordance with safety guidelines and engineering constraints. In areas where natural exposures are few, or deeply weathered, this measure would permit on-going improvement of geological knowledge of the subsurface and could be included as additional sites of the geoheritage dataset, if appropriate. Alternatively, we ask that a digital photographic record of significant new excavations could be provided. Potential visits from Geological Survey Ireland to personally document exposures could also be arranged.

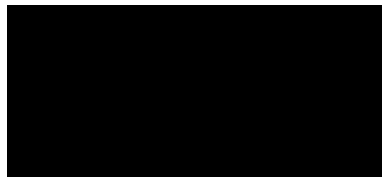
The data would be added to Geological Survey Ireland's national database of site investigation boreholes, implemented to provide a better service to the civil engineering sector. Data can be sent to the Geological Mapping Unit, at <mailto:GeologicalMappingInfo@gsi.ie>, 01-678 2795.

I hope that these comments are of assistance, and if we can be of any further help, please do not hesitate to contact me [REDACTED], or my colleague [REDACTED] at GSIPanning@gsi.ie.

Yours sincerely,



**Senior Geologist
Geological Survey Ireland**



**Geoheritage and Planning Programme
Geological Survey Ireland**

Enc: Table - Geological Survey Ireland's Publicly Available Datasets Relevant to Planning, EIA and SEA processes.

From: [REDACTED] (Housing)
Sent: Tuesday 22 November 2022 16:18
To: [REDACTED] (Housing)
Subject: RE: FS006859 - Inis Ealga Marine Energy Park Ltd.

[REDACTED]
No further comments

[REDACTED]
Regards

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