

Prescribed Bodies Submissions

Submission 1: Marine Survey Office

“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.”*

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. welcomes the Marine Survey Offices’ comment that they have no objection to the application for Foreshore Licence. Clarus Offshore Wind Farm Ltd. notes the requests made by the MSO in the submission above and will ensure timely notice of the proposed site investigations, including information *‘regarding the position of any markings which create a hazard to navigation shall be promulgated to the mariner’* where relevant, will be provided through the publication of a Marine Notice.

Submission 2: Kerry County Council Planning Dept.

“It appears from the information submitted that the application area avoids both the Ballybunion North and South Blue Flag Beaches. It is noted that the developer will undertake a separate Ecology Survey Scoping exercise, which will involve engagement with local authorities and the NPWS.

From a potential archaeological impact point of view, the areas of the foreshore application of primary interest from a KCC point of view comprise those areas along the south side of the Shannon Estuary from Leck Point to Tarbert. The Shannon Estuary

would always have been a major routeway and access point throughout prehistory and the historic period, indeed excavations adjacent to the foreshore in Kilpaddoge (ESB) uncovered evidence of Mesolithic and early Neolithic occupation as well as later activity. Areas along the estuary would have provided ideal conditions for early hunter-gatherers when sea levels were lower and such estuarine and likely marsh/fen environments would have provided abundant food resources at various times of the year.

Indeed, the potential for material from the prehistoric and historic period, as well as more recent evidence for maritime trade and exploitation of the sea (boats, shipwrecks, fishing infrastructure and equipment) to survive, preserved in the muds and silts on both sides of the estuary would be high and this needs to be taken into account in assessing the foreshore application. It is noted that geophysical surveys including echo sounding, side scan sonar etc. are proposed and these will provide data on certain aspects of the riverbed but not necessarily on areas closer to the modern shoreline. In these areas more intensive, dive and wade surveys would be required to try and identify buried archaeological material and/or strata. Artefact recovery from areas within the foreshore licence area will also be an issue during the course of any future works and the proposed geotechnical surveys.

Given, the extent and location of the proposed geotechnical surveys and in accordance with the provisions of objectives KCDP8-24, KCDP8-25, KCDP8-26 & KCDP8-30 of the Kerry CDP 2022-2028 the archaeological mitigation measures outlined below should be made a condition of any grant of a foreshore licence.

Details of other developments, plans or projects that may, in conjunction with this application, have a cumulative effect on a European site.

The proposal contained within the Strategic Infrastructure Planning Application Reference Number ABP:-311233-21 should be taken into account, where relevant.

Recommended conditions for attaching to any foreshore licence that may be granted.

Beach restrictions:

Beach restrictions shall not be implemented during the summer months on any beaches, without the prior written agreement of the relevant local authority.

Archaeology

Given, the extent and location of the proposed geotechnical surveys and in accordance with the provisions of objectives KCDP8-24, KCDP8-25, KCDP8-26 & KCDP8-30 of the Kerry CDP 2022-2028 the following mitigation should be made a condition of any grant of a foreshore licence:

- Prior to the taking place of any geotechnical tests the data from the geophysical surveys should be fully assessed to identify any features that may be of archaeological interest. In areas closer to shore where estuarine muds and silts have built up dive and wade surveys should be conducted prior to any geotechnical testing.
- All geotechnical tests should be archaeologically monitored, under license, by a suitably qualified archaeologist with experience in dealing with underwater archaeological material. A suitable strategy for recovering potential archaeological artefacts from any excavated material would also need to be put in place as part of the monitoring programme

Other

In addition, while not part of the part of this foreshore license application, it is considered that the Kerry County Development Plan 2022-2028 should be taken into consideration, in determining preferred export cable route and landfall location(s), including Chapter 9 Economic Development, Chapter 11 Environment and Chapter 12 Energy. Where road infrastructure may be required to facilitate offshore energy proposals including underground cables, early discussions with the roads department is advised."

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. thanks Kerry County Council's Planning Department for its comments on the application for Foreshore Licence FS006886. Clarus Offshore Wind Farm Ltd. notes Kerry County Council Planning Department's recommendation and will consider the Strategic Infrastructure Planning Application Reference Number ABP-311233-21 where relevant.

Clarus Offshore Wind Farm Ltd. notes the recommended condition that beach restrictions should not be implemented during the summer months without the prior written agreement of the relevant local authority. Clarus Offshore Wind Farm Ltd. would be happy to adhere to any such condition of Foreshore Licence.

Kerry County Council Planning Department's response sets out 2 no. of recommended conditions pertaining to potential mitigation measures in relation to potential archaeological impacts of the proposed site investigations. Given the timelines associated with the determination of the application for Foreshore Licence FS006886, it is possible that the proposed geophysical and geotechnical site investigations will be undertaken within a given calendar year and avail of similar weather windows. As such, it is unlikely that data from the geophysical surveys can be "fully assessed" prior to the proposed geotechnical sampling considering the lengthy processing time associated with same. Clarus Offshore Wind Farm Ltd. will contract a licence eligible archaeologist to undertake a desk-based review of the existing archaeological information ahead of commencement of the proposed site investigations. The report furnished from this assessment will contain a detailed methods statement and proposed mitigation measures that will be submitted to the National Monuments Service of the Department of Housing, Local Government and Heritage for comment. Clarus Offshore Wind Farm Ltd. will seek licences for the proposed site investigations from the National Monuments Service of the Department of Housing, Local Government and Heritage ahead of the proposed site investigations, including a 'Detection Device consent' (Section 2 and a 'Dive Survey licence' (Section 3 of the National Monuments (Amendment) Act 1987).

Clarus Offshore Wind Farm Ltd. notes Kerry County Council Planning Department's request that Clarus Offshore Wind Farm Ltd. has regard to the Kerry County Development Plan 2022- 2028.

Submission 3: Clare County Council Planning Dept.

"The response as set out is issued in the context of the Clare County Development Plan 2017- 2023 (as varied). You are requested to have regard to the development objectives set out in the Plan with regard to issues such as coastal community development, economic development, physical infrastructure, environment, energy, tourism, natural resources, the Shannon Estuary, marine and coastal zone management, biodiversity and natural heritage, climate change adaptation, and the low carbon strategy. You are also requested to have regard to the draft Clare County Development Plan 2023-2029.

The Screening for Appropriate Assessment and Natura Impact Statement together with the Supporting Information outline the extent of site investigations to be undertaken within the Investigation Area {93,622ha) off the Clare coastline. The extent and number of investigations required particularly the number of vibrocore, cone penetration, ecological (c.65 grab samples) coupled with physical equipment which will require placement in the marine and transitional environment (JUB, 2 x floating LiDAR buoys, 5 x ADCP, marker buoys plus 2 x waverider buoys) is significant.

As outlined in the Screening Report there is potential for overlap with other proposed site investigations associated with other proposed offshore projects. Prior to the commencement of any such surveys the applicant should investigate the potential for a more comprehensive approach to this data gathering with the other entities looking to establish off the Clare coastline. Clare County Council is acutely aware of the emergence of several individual piecemeal approaches to survey work planned both in the Shannon Estuary and off the west and north Clare coastline which is currently being developer led on a site-by-site basis to support individual planning applications/foreshore licences for different stages of marine developments. This type of project led assessment does not take into consideration the wider ecosystems in terms of impacts and poses a significant risk and potential delay to the development of marine renewables both in the estuary and beyond.

The benefits for undertaking a wider integrated approach to ecological surveys are clear. Modest resources committed over a long period is far more efficient than one-off relatively short-term data gathering programmes. There is significant merit in all entities looking to establish cable corridors or cable landings points undertaking this in a comprehensive manner together with an agreed sustainable approach to funding, data gathering and ownership of said data.

The availability of up-to-date scientific data undertaken over several years will add greatly to the value proposition for Shannon Estuary/Clare Coastline to attract sustainable renewable energy investment, by reducing the cost and time burdens (in terms of years) for individual developers, enabling compliance with the requirements of the Habitats Directive and thus providing a significant degree of policy and project-level planning and investment certainty.

We would also request that consideration is given to the Strategic Integrated Framework Plan for the Shannon Estuary (SIFP) and the identified Strategic Development Locations and Areas of Opportunity. The preferred cable corridor and/or cable landing points must not prejudice the development of these lands at any future stage.

You are advised to consult the SIFP (volume 1) and the associated volume of mitigation measures (volume 2) to establish which apply in this case and which are of relevance to the scope of the assessments required. The mitigation measures should be reviewed in terms of which are relevant, and which apply to the proposed foreshore licence application. Volume 2 should be used to further inform the scope of site investigations that may be required particularly within the Shannon Estuary.

Clare County Council would recommend that consideration is given by the applicant in facilitating spare capacity within the cable that is laid in the Shannon Estuary to avoid the requirement for laying additional cables in the future."

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. notes Clare County Council's request that Clarus Offshore Wind Farm Ltd. has regard to the Development Plan 2017-2023 (as varied) and the draft Clare County Development Plan 2023-2029.

Clare County Councils' submission outlines the potential benefits of a wider strategic approach to data collection considering the multiple planning applications/foreshore licences (existing or proposed) undertaking similar site investigations. Clarus Offshore Wind Farm Ltd. understands the merit in such a proposal. However, as stated in the Clare County Council submission, projects are predominantly developer-led and in the case of Offshore Renewable Energy, projects are competitive with respect to seabed leases (Maritime Area Consents). In lieu of such strategic approaches to characterisation studies, such as those proposed within application for Foreshore Licence FS006886, Section 4.2.3 of the document entitled '*Supporting Information for Screening for Appropriate Assessment and Natura Impact Statement*' submitted in support of the application for Foreshore Licence sets out a detailed appraisal of potential in-combination effects resulting from activities of other developments, including other applications for Foreshore Licence that were published on the Government of Ireland Foreshore Notices [website](#) and industry knowledge sourced online/through membership of industry bodies such as Wind Energy Ireland, at the time of preparation of those documents.

Clare County Councils' submission outlines a recommendation to consider facilitating spare capacity within the cable that is laid in the Shannon Estuary in order to "*avoid the requirement for laying additional cables in the future*". Clarus Offshore Wind Farm Ltd. will consider the potential for same as the project design progresses and explore the range of the largest cable cross sectional areas (i.e., the cable diameters) that manufacturers produce in order to minimise the number of subsea cables required. It should be noted however that other factors need to be examined when considering larger cables such as the weight of cable drums that can be handled by the installation vessels available, and the suitability with the electrical connections used which may ultimately limit the upper cable size. Further, Clarus Offshore Wind Farm Ltd. will also consider Dynamic Line Rating that is currently an EirGrid requirement set out in their [Phase 1 Functional Specifications](#), which allows the developer to vary the power carried by the cable depending on the operating conditions (e.g. sea temperature). This allows higher power to be carried within the subsea cable.

Submission 4: Commissioner for Irish Lights

"Irish Lights notes from the application that there may 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. We note from the document Site Investigation – schedule of works that the word 'amber' is used. We would advise when applying for Statutory Sanction that this be replaced with 'yellow' as per the IALA guidelines.

The foreshore license sought is located off the Shannon estuary, which is a high traffic density area. Irish Lights therefore, advise consultation with local authorities including Shannon Foynes Port Company 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 existing 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."

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. notes the Commissioners of Irish Lights' submission and will seek consent in the form of Statutory Sanction under the Merchant Shipping Act before any aid to navigation is established, altered or disestablished. Further, Clarus Offshore Wind Farm Ltd. will give timely notice before commencement of the proposed site investigations through the publication of Marine Notices, through its ongoing engagement with fisheries and consultation with local authorities including the Shannon Foynes Port Company and the Marine Survey Office.

Submission 5: National Parks and Wildlife Service

"Marine Science and Biodiversity Recommendations:

The proposed survey works at and around the proposed Clarus Offshore Wind Farm off Co Clare and Kerry have been evaluated by a Natura Impact Statement and other documents. The conclusion of the document to support the decision on Article 6(3) is that the proposed works are unlikely to pose a significant likely risk to nature conservation interests in the vicinity.

It is recommended that the application of "Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters" should be implemented in full as a condition of consent (available to download [here](#) or updates that might occur).

It must be noted that all cetaceans are listed under Annex IV (including those in Annex II) of Council Directive 92/43/EEC (the Habitats Directive). Accordingly, under Article 12 of that Directive, it is an offence to deliberately capture, disturb or kill a cetacean or take actions that result in deterioration or destruction of their breeding sites or resting places. This has been transposed into Irish Law by Regulation 51 of the European Communities (Birds and Natural Habitats) Regulations. Introduction of certain sound sources into the marine environment, as may result from construction or surveys (e.g. geophysical survey) over the foreshore, have the potential to cause injury and possibly mortality in these species. All marine mammals are protected wild animals under the Fifth Schedule, which includes all cetacean and seal species, of the Wildlife Act (39 of 1976) and Amendments. Under Section 23 (as amended in 2000), it is an offence to kill, injure or wilfully interfere with or destroy the breeding place or resting place of any protected wild animal."

Clarus Offshore Wind Farm Ltd. Response: As set out in Section 5 of the 'Risk Assessment for Annex IV Species', Section 4 of the 'Environmental Supporting Information' document and Section 5 of the 'Supporting Information for Screening for Appropriate Assessment and Natura Impact Statement' document submitted in support of the application for Foreshore Licence FS006886, Clarus Offshore Wind Farm Ltd. will adhere to the 2014 DAHG guidance entitled 'Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters' and consider any relevant updates to this guidance ahead of the proposed site investigations.

Submission 6: Department of Agriculture Food and Marine - Foreshore Section

"I refer to your request for comments/observations from this Department regarding this application for Clarus Offshore Windfarm Ltd.

Our Engineering Division have provided their reply and has no objections."

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. welcomes the Department of Agriculture Food and Marine - Foreshore Sections' comment that they have no objection to the application for Foreshore Licence FS006886.

Submission 7: Marine Advisor – Environment (Dept. of Housing Planning and Local Gov.)

"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 public and prescribed bodies' consultation."

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. welcomes the Marine Advisor – Environment's comment that they have no objection to the application for Foreshore Licence FS006886.

Submission 8: Underwater Archaeology Unit (UAU; Dept. of Housing Planning and Local Gov.)

"Section 4.8 (Archaeology) of the application document 'CLARUS OFFSHORE WIND FARM LIMITED Investigative Foreshore Licence Application: Reference FS006886, Environmental Supporting Information' contains a brief overview of the potential effects and proposed mitigation pertaining to archaeology. This section, and the broader application documentation, does not adequately assess the archaeological potential of the application area and the sufficiency or otherwise of the proposed mitigation cannot therefore be addressed without further information. We note that the proposed Foreshore Licence application area contains numerous wrecks protected under Section 3 of the 1987 National Monuments (Amendment) Act within the Application Area. The Wreck Inventory of Ireland Database (WIID) is the official register of historic shipwrecks protected under the National Monuments Acts. All wrecks over 100-years old are protected under the 1987 and 1994 (Amendment) Acts of the National Monuments Acts. Over 18,000 wrecks have been recorded to date within the WIID, ranging from small fishing boats, logboats and coastal traders to steamships and ocean going ships. Though earlier sources have been included where obtainable, the Inventory is largely based on documentary sources available from after 1700AD. As such, it is important to stress that previously unrecorded wreck sites, including those dating to earlier periods, may await discovery in the application area under consideration here. National policy, as set out in Frameworks and Principles for the Protection of the Archaeological Heritage states 'there should always be a presumption in favour of avoiding developmental impacts on the archaeological heritage' and, given the archaeological sensitivity of the application area, this core principle should be proactively enshrined within the design process.

In light of the above we recommend the following CONDITIONS be included with any Foreshore Licence that may issue:

1. *A desk study Underwater Archaeological Impact Assessment (UAIA) report shall be forwarded by the licensee to the National Monuments Service of the Department of Housing, Local Government and Heritage for review and approval prior to the geophysical survey works taking place. The desktop assessment will allow for the identification of wrecks and other underwater archaeological features and areas of potential within the Foreshore Licence Application Area so that when geophysics is being undertaken, their locations will be known in advance and they can be targeted for specific survey methodologies, as appropriate. The assessment shall include a full inventory and mapping of the sites of all identified and recorded archaeological/cultural heritage features and structures (including industrial, vernacular and maritime/fishing structures) and any wrecks or potential wrecks within the Foreshore Licence Application Area identified from a review of the Wreck Inventory of Ireland Database and any previous geophysical survey data sets available. Where archaeological materials/areas of archaeological potential, wrecks are shown to be present, the report shall recommend mitigation measures and shall highlight how these areas will be targeted for detailed geophysical survey. Having completed the work, a written report shall be submitted to the National Monuments Service for review and no works shall be undertaken until a response has been received.*
2. *The proposed geophysical surveys shall be carried out in advance of any geotechnical works and in advance of the deployment of metocean monitoring equipment, to ensure all potential impacts to the underwater cultural heritage are avoided.*
3. *A Protocol For Archaeological Discoveries shall be agreed in advance of the commencement of any geophysical or geotechnical works with the National Monuments Service of the Department of Housing, Local Government and Heritage.*
4. *Geophysical survey of all geotechnical and potential areas of physical impact is required. At a minimum geophysical surveys shall include side scan, sonar, magnetometer and multibeam echo sounder. The geophysical surveys shall be licenced under the National Monuments Acts 1930-2014. A Dive Survey Licence (Section 3 1987 National Monuments Act) and Detection Device consent (Section 2 1987 National Monuments Act) will be required. Licence applications, accompanied by Method Statements, shall be sent for vetting to the National Monuments Service of the Department of Housing, Local Government and Heritage.*
5. *Should any dive surveys be required in connection with proposed geophysical surveys and archaeological surveys these shall be licenced (Section 3 1987 National Monuments Act). Any dive survey shall be accompanied by a handheld metal detection survey which shall also be licenced (Section 2 1987 National Monuments Act). All archaeological diving shall comply with the Health and Safety Authority's Safety, Health and Welfare at Work (Diving) Regulations 2018/2019.*
6. *An Underwater Archaeological Impact Assessment (UAIA) report shall be forwarded to the National Monuments Service of the Department of Housing, Local Government and Heritage for review and approval prior to the*

geotechnical works taking place. The UAIA shall augment the previous desk study assessment and shall include the following:

- a. Results of geophysical survey data sets assessment by a suitably qualified and experienced archaeologist to ensure that proposed geotechnical works do not negatively impact on locations where there is known or potential archaeology and to ensure no samples or cores are taken from an area where a wreck site is located. The archaeologist should also be suitably experienced, with a track record in dealing with and the interpretation of marine geophysical data for archaeological purposes, including ensuring it is of sufficient specification for the identification of underwater cultural heritage.*
 - b. Outcome of a detailed visual walk-over survey accompanied by a metal detection survey of areas proposed for SI works on the foreshore/intertidal zone.*
 - c. Assessment of geophysical data for all proposed geotechnical investigation locations (including the taking of vibro-cores and grab samples). The assessment shall be undertaken by a suitably and demonstratively qualified archaeologist to ensure that the proposed works do not negatively impact on locations where there is known or potential archaeology and to ensure no samples or cores are taken from an area where a wreck site is located.*
 - d. Once all surveys and interpretations have been completed, the full information should be compiled into a UAIA report and submitted to the National Monuments Service for review and further comment, prior to undertaking any invasive geotechnical works. The UAIA Report should contain a detailed Archaeological Impact Assessment that addresses all identified potential impacts on underwater archaeological heritage and should also make recommendations on mitigation measures to avoid or mitigate all impacts. Potential secondary or indirect impacts, such as access roads or construction works to facilitate access to the waterways, for example, shall also be included. If potential or identified sites, features or artefacts cannot be avoided (preservation in situ) by geotechnical works, then the UAIA Report Recommendations should put forward an archaeological mitigation strategy to address this, including preservation by record (archaeological testing and/or full archaeological excavation). 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 National Monuments Service in this regard or in regard to any subsequent recommendations that may issue.*
- 7. Following the completion of all geotechnical works the licensee shall furnish the project archaeologist with the results of all site investigation works and shall them with provide access to site investigation cores and physical samples for review. Where potential submerged palaeolandscape deposits are identified they shall be, where suitable samples are available, radiocarbon dated in agreement with the National Monuments Service and subject to approval of*

Licences to Alter and Export from the National Museum of Ireland. Following the completion of all geotechnical and archaeological works and any necessary post-excavation specialist analysis, the National Monuments Service shall be furnished with a final archaeological report describing the results of the works. All resulting and associated archaeological costs shall be borne by the developer."

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. thanks the Department's Underwater Archaeology Unit for its comments on the application for Foreshore Licence FS006886. Clarus Offshore Wind Farm Ltd.'s response to each of the 7 no. proposed recommendations as follows:

1. Prior to commencement of the proposed site investigations, Clarus Offshore Wind Farm Ltd. will prepare an archaeological desk study to collate the existing information and outline a detailed methods statement of the proposed site investigations in relation to potential impacts on archaeology. Any report furnished from this desktop study will be submitted to the National Monuments Service of the Department of Housing, Local Government and Heritage for comment.
2. Given the timeline associated with the determination of the application for Foreshore Licence FS006886, it is possible that the proposed geophysical and geotechnical site investigations will be undertaken within a given calendar year and avail of similar weather windows. As such, it is unlikely that data from the geophysical surveys can be assessed in full prior to the proposed geotechnical sampling considering the lengthy processing time associated with same. Clarus Offshore Wind Farm Ltd. will contract a licence eligible archaeologist to undertake a desk-based review of the existing archaeological information ahead of commencement of the proposed site investigations. The report furnished from this assessment will contain a detailed methods statement and proposed mitigation measures that will be submitted to the National Monuments Service of the Department of Housing, Local Government and Heritage for comment.
3. Clarus Offshore Wind Farm Ltd. has no objection to proposed condition to seek agreement on a Protocol For Archaeological Discoveries with the National Monuments Service of the Department of Housing, Local Government and Heritage prior to the commencement of the proposed site investigations.
4. The proposed site investigations include Side Scan Sonar, Magnetometer and Multibeam Echosounder as set out in the document entitles '*Schedule of Survey Activities*' submitted in support of the application for Foreshore Licence FS006886. Clarus Offshore Wind Farm Ltd. notes the UAU's request that a Dive Survey Licence (Section 3 1987 National Monuments Act) and a Detection Device consent (Section 2 1987 National Monuments Act) should be sought and Clarus Offshore Wind Farm Ltd. will seek same from the National Monuments Service of the Department of Housing, Local Government and Heritage ahead of the proposed site investigations.
5. Clarus Offshore Wind Farm Ltd. notes UAU's proposed condition no.5 and will apply for a Dive Survey Licence (Section 3 1987 National Monuments Act) and a Detection Device consent (Section 2 1987 National Monuments Act) ahead of any such dive surveys. All archaeological diving shall comply with the Health and Safety Authority's Safety, Health and Welfare at Work (Diving) Regulations 2018/2019.

6. Given the timeline associated with the determination of the application for Foreshore Licence FS006886, it is possible that the proposed geophysical and geotechnical site investigations will be undertaken within a given calendar year and avail of similar weather windows. As such, it is unlikely that data from the geophysical surveys can be processed in full and a report submitted to the National Monuments Service of the Department of Housing, Local Government and Heritage for comment prior to the proposed geotechnical sampling. Clarus Offshore Wind Farm Ltd. will contract a licence eligible archaeologist to undertake a desk-based review of the existing archaeological information ahead of commencement of the proposed site investigations. The report furnished from this assessment will contain a detailed methods statement and proposed mitigation measures that will be submitted to the National Monuments Service of the Department of Housing, Local Government and Heritage for comment.
7. Clarus Offshore Wind Farm Ltd. will provide a copy of the archaeological reporting on completion of the proposed site investigations and subsequent reporting. The recommended condition no.7 set out in UAU's submission includes the request that *"Where potential submerged palaeolandscape deposits are identified they shall be, where suitable samples are available, radiocarbon dated in agreement with the National Monuments Service and subject to approval of Licences to Alter and Export from the National Museum of Ireland"*. Clarus Offshore Wind Farm Ltd. believes that such a request is not proportionate to the scope of the proposed site investigations to which this application Foreshore Licence FS006886 pertains and see no relevance of such ancillary analyses to the assessment of the potential impacts of the proposed site investigations. As such, Clarus Offshore Wind Farm Ltd. is not supportive of the inclusion of such a condition in a Foreshore Licence if issued.

Submission 9: Marine Institute

"The Marine Institute advises that during assessment of likely effects, 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 and species (outside of licenced area) be also 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.

We note there are some Aquaculture licenced areas adjacent to and within the proposed survey area. These are confined to the Shannon Estuary and their exact locations and details of species cultured can be found at the following link: <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 the Shannon Estuary. These reports can be found at the following link and give an indication of likely aquaculture activities occurring in the general area."

Clarus Offshore Wind Farm Ltd. Response: The in-combination assessment included in the documents submitted in support of the Clarus Offshore Wind Farm Ltd. application for Foreshore Licence FS006886 gave consideration to all other developments including other applications for Foreshore Licence that were published on the Government of Ireland Foreshore Notices [website](#) and industry knowledge sourced online/through membership of industry bodies such as Wind Energy Ireland at the time of preparation of those documents. Those other developments deemed relevant were those with potential for in-combination effects with the proposed site investigations. The full list of developments considered is detailed in Section 4.2.3 of the document entitled ‘*Supporting Information for Screening for Appropriate Assessment and Natura Impact Statement*’ submitted in support of the application for Foreshore Licence FS006886.

The only potential in-combination effects on Natura 2000 sites identified in the document entitled ‘*Supporting Information for Screening for Appropriate Assessment and Natura Impact Statement*’ in relation to the proposed site investigations relevant to fisheries are due to noise from the proposed geophysical survey activities and disturbance to reef and salt meadow habitat due to penetration during borehole drilling.

Such in-combination effects due to underwater noise would only arise if two or more geophysical survey equipment operators are operating within close proximity and would be dependent on the specification of the equipment being used as much of noise falls outside the hearing range of Annex II/Annex IV species. To the best of our knowledge, the existing potting and aquaculture operations do not include geophysical survey activities.

In relation to the proposed geotechnical site investigations, the proposed geotechnical sampling events are likely to cause insignificant deposition levels and an estimated area of only 1-2 m² is expected to be affected per borehole, representing the likely footprint of the drill pipe penetration equipment itself. As such, the proposed site investigations are expected to induce low levels of disturbance and deposition levels that are within storm background levels of sediment migration and are therefore it is considered unlikely that any increase in suspended sediments due to in-combination effects would impact upon conservation features of the Natura 2000 sites.

Submission 10: Inland Fisheries Ireland

“A risk assessment and screening prepared on behalf of the applicant noted the potential for disturbance to marine mammals and protected habitats, thereby necessitating Appropriate Assessment given the possibility of unforeseen impacts attributable to these and other separate ongoing and planned activities across the area in question. From an Inland Fisheries Ireland (IFI) perspective, a section of an important SAC (Lower River Shannon SAC #002165) is incorporated into the Foreshore Licence Application Area. The relevant qualifying interests, namely sea lamprey, river lamprey and Atlantic salmon, present also in another nearby SAC (Castlemaine Harbour #000343), were screened-out as no likely significant effects (LSEs) were perceived.

An independent Appropriate Assessment screening report, undertaken for the Marine Adviser, extended the Zone of Influence for these qualifying interests from 15km to 200km, as well as screening them in due to the possibility of disturbance due to underwater noise. Inland Fisheries Ireland would concur with these revised likely significant effects (LSEs) and the potential to impact negatively on the conservation objectives of several European sites. In addition, sea lamprey and river lamprey could be

further impacted as many of the fish and cetacean species upon which they parasitise may themselves be affected and disturbed by underwater noise and investigative activities. Atlantic salmon along with twaite shad, a wide-ranging marine species which is a qualifying interest in 4 SACs along the south and southeast coasts, and sea trout would be expected to migrate through or forage within the Foreshore Licence Application Area. Aside from these revisions, it should be noted that the Screening for Appropriate Assessment Report was in broad agreement overall with the submissions from the applicant, Clarus Offshore Wind Farm Ltd.

Mitigation measures should aim to reduce the sound generated, in intensity and duration. The use of soft-start and ramp-up procedures for any sound-generating surveys undertaken both on a day-to-day basis and on re-start after any stoppages within any day should be undertaken. This measure should be a condition of the foreshore licence. The comments of IFI in this regard relate to fish species of conservation significance and of leisure angling significance all of which constitute part of IFI's brief."

Clarus Offshore Wind Farm Ltd. Response: As set out in Section 3.4.2 of the document entitled 'Environmental Supporting Information' submitted in support of application for Foreshore Licence FS006886, species such as Atlantic salmon and sea and river lamprey have a lower sensitivity to sound (in comparison to twaite shad) as their swim bladder is located far from the ear (Popper *et al.*, 2014). The hearing of these species only involves particle motion and not sound pressure, and they are therefore less susceptible to impacts from the proposed site investigations. These species are susceptible to internal injury (barotrauma) from a rapid pressure change, i.e., unexploded ordnance detonation, which does not form part of the proposed site investigations (Popper *et al.*, 2014).

Popper *et al.* (2014) determined that continuous sound can cause a Temporary Threshold Shift (TTS) in hearing specialist fish, such as twaite shad, when exposed for more than 158 dB re 1 μ Pa rms for 12 hours or more. Recoverable injury may occur with exposure to 170 dB re 1 μ Pa rms for more than 48 hours. Fish are likely to leave the survey area during the proposed survey activities horizontally or move to deeper water, away from the noise source (Løkkeborg and Soldal, 1993; Engas *et al.*, 1993, 1996). Therefore, it is unlikely that fish will experience significant impact other than temporary displacement from the immediate area surrounding the proposed geophysical survey activity. Additionally, geophysical surveys progress relatively quickly, typically 1 m/s (approximately 2 knots) and the maximum time that any point within an 83 m radius of the survey vessel would experience noise levels above the thresholds is less than 5 minutes.

Due to the distance of the surveys from the SACs, and as the disturbance effects from noise associated with the proposed survey operations will be localised, temporary and transient there is unlikely to be any significant disturbance to twaite shad within the SAC. Given the transient and temporary nature of the proposed site investigations, it is unlikely that there will be any long-term effect on the distribution of the species and migration to and from rivers will not be impeded.

Further, while the 2014 DAHG guidance entitled 'Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters' is not targeted to Annex II species, Clarus Offshore Wind Farm Ltd. will be adhering to, and considering any relevant updates to, this guidance for the proposed site investigations. The guidance reflects the same mitigation measures outlined in Inland Fisheries Ireland's submission on a Ramp-Up Procedure using equipment where the output peak sound pressure level from any source exceeds 170 dB re:

1µPa @1m. As such, Clarus Offshore Wind Farm Ltd.'s adherence to the guidance implies Clarus Offshore Wind Farm Ltd.'s adherence to the mitigation measure set out in Inland Fisheries Ireland's submission also.

Submission 11: Sea Fisheries Protection Authority

SFPA Submission Point 1:

"While some minimal disturbance to the marine habitat (both littoral and sub littoral) will occur during these investigations, it is unlikely that this will impact greatly on fish assemblages or fishing activity in the area. The appointment of a Fisheries Liaison Officer and their engagement with relevant fishers should assist to negate any potential effects. The supporting documentation focuses mainly on the activities of larger vessels but the majority of vessels operating in this area are <10m vessels which are outside VMS and logbook requirements. The liaison officer should target this <10m sector in any further mitigation efforts and in any future applications. There are no significant negative impacts on existing wild fisheries in the area and no foreseeable implications for the SFPA conducting official controls and possible non-compliance issues that could arise."

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. appointed John Power of Emerald Marine Ltd. as the designated Fisheries Liaison Officer (FLO) for Clarus Offshore Wind Farm in 2020, and as stated, has been engaging with the fishing community since 2020 and as such have been made aware of the number of vessels <10m operating in Foreshore Licence Application Area.

Clarus Offshore Wind Farm Ltd. has had pier meetings (attended by both DP Energy Ireland's Community and Stakeholder Liaison Manager and their representative Fishery Liaison Officer John Power of Emerald Marine Ltd.) with fishers, including <10m fishers, at all fishing harbours from Ros an Mhíll to Dingle to introduce them to DP Energy, Clarus Offshore Wind Farm Ltd. and to inform them about the Clarus Offshore Wind Farm project. An email was also sent to all the Fish Producers Organisations providing advance notice of upcoming pier meetings with a request that members be contacted. Individual fishers were also contacted via email and telephone call by the project FLO and DP Energy Ireland's Community and Stakeholder Liaison Manager. Minutes of the meetings were sent to each attendee and fishing representative bodies after the events. A record of the time series of these engagements is captured below:

- 15/02/2022 – Ros an Mhíll Harbour
- 15/02/2022 – Aran Mór
- 16/02/2022 - Fenit
- 16/02/2022 - Dingle
- 16/02/2022 - The Maharees
- 09/03/2022 - Carrigaholt
- 09/03/2022 - Doonbeg

Undertaking such engagement ensures that the fishing community is notified of any relevant updates or changes to the project in a timely manner. Clarus Offshore Wind Farm Ltd. is aware that it is not practical for fishers to take time out of their fishing day to meet with Offshore Renewable Energy (ORE) developers, Clarus Offshore Wind Farm Ltd. therefore restricts engagement to meaningful meetings and does not hold meetings or conduct calls without a valid reason.

Clarus Offshore Wind Farm Ltd. made all of the documentation and information pertaining to this application for Foreshore Licence FS006886 (as available on the Government of Ireland Foreshore Notices website [here](#)) widely available to all interested parties. Public Notices directing interested parties to the documents and information relating to this application for Foreshore Licence FS006886, both online and in hard copy format at various exhibition spaces, were published within the following newspapers:

- Irish Independent;
- Clare Champion;
- Kerry Eye.

The application for Foreshore Licence documents for FS006886 were also put on display to the public at the following locations:

- Kilkee Garda Station, Dough, Kilkee, Co. Clare.
- Kilrush Garda Station, Ennis Road, Kilrush, Co. Clare.
- Ballybunion Garda Station, Main Street, Ballybunion, Co. Kerry.
- Tarbert District Garda Station, Bridewell Street, Tarbert, Co. Kerry.
- Kilrush Civic Offices, Town Hall, Kilrush, Co. Clare.
- Kilkee Library, O'Connell St, Dough, Kilkee, Co. Clare.
- Kilrush Library, O'Gorman Street, Kilrush, County Clare.

Clarus Offshore Wind Farm Ltd. recognises the area covered by the fishing community that work in the proposed Foreshore Licence Application Area, and as such the application for Foreshore Licence documents were also sent to the Harbour Masters of Dingle, Fenit and Galway Harbours for ease of access by the fishing community.

An email was sent to fishers, each Fish Producers Organisation, Regional Inshore Fisheries Forums and National Inshore Fisheries Forums to inform members that the Public Consultation in accordance with Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 was underway. This communication directed interested parties to the documents and information relating to this application for Foreshore Licence FS006886, both online and in hard copy format at various exhibition spaces. This was followed up with phone calls from the FLO appointed by Clarus Offshore Wind Farm Ltd. to a subset of fishers known not to have access to email.

Clarus Offshore Wind Farm Ltd. is acutely aware of the risk of stakeholder fatigue and the long and varied hours worked by fishers. Clarus Offshore Wind Farm Ltd. strives to ensure that correct and factual information is shared with the fishing community and as such only have meetings when necessary to impart important information.

SFPA Submission Point 2:

“The application lies within the boundaries of and adjacent to an existing classified shellfish production area (Ballylongford). This area is actively in production, with numerous sites being utilised(T06/347A,T06347B,T06370A,T06/233). Care should be taken when issuing the licence to ensure that rights, if any, contained in the fishery order, aren't impacted by this foreshore licence. The appointment of a Community Liaison Officer and their engagement with shellfish producers in the area, as stated in the application documentation, should be continued and involve all producers. Further, there is also a classified site upstream of the application area(T07/007), this is a dormant site.

There are no foreseeable implications for the SFPA conducting official controls and possible non-compliance issues that could arise."

SFPA Submission Point 3:

"There are potential impacts on seafood safety e.g. the application lies within the boundary of and adjacent to active shellfish production areas. The application is proposed to occur over a short timeframe, therefore any potential impacts should be temporary. The Fisheries and Community Liaison Officers should continue their engagement with the shellfish producers to negate any potential impacts."

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. appointed a designated Fisheries Liaison Officer (FLO), John Power of Emerald Marine Ltd., in 2020. This FLO has been engaging with the fishing community on behalf of Clarus Offshore Wind Farm Ltd. since 2020. This engagement includes shellfish producers and relevant bodies including the IFA Aquaculture, as referred to in the submissions from the SFPA above.

Submission 12: BIM

"Although there are no fisheries subjected to a Fisheries Natura Plan in the area of this application there is however considerable fishing activity in the area especially potting for lobster and shrimp in the estuary and fishing for brown crab outside the estuary. In addition, there are aquaculture licensed areas and Oyster Fishing Orders in the Lower River Shannon SAC(2165). It is BIM's view that an Appropriate Assessment would need to take account of "in combination effects" that the proposed site investigations would have on Natura sites covered by this application."

Clarus Offshore Wind Farm Ltd. Response: The in-combination assessment included in the documents submitted in support of the Clarus Offshore Wind Farm Ltd. application for Foreshore Licence gave consideration to all other developments including other applications for Foreshore Licence that were published on the Government of Ireland Foreshore Notices [website](#) and industry knowledge through membership of industry bodies such as Wind Energy Ireland at the time of preparation of those documents. Those other developments deemed relevant were those with potential for in-combination effects with the proposed site investigations. The full list of developments considered is detailed in Section 4.2.3 of the document entitled 'Supporting Information for Screening for Appropriate Assessment and Natura Impact Statement' submitted in support of the application for Foreshore Licence FS006886.

The only potential in-combination effects on Natura 2000 sites identified in the document entitled 'Supporting Information for Screening for Appropriate Assessment and Natura Impact Statement' in relation to the proposed site investigations relevant to fisheries are due to noise from the proposed geophysical survey activities and disturbance to reef and salt meadow habitat due to penetration during borehole drilling.

Such in-combination effects due to underwater noise would only arise if two or more geophysical survey equipment operators are operating within close proximity and would be dependent on the specification of the equipment being used as much of noise falls outside the hearing range of Annex II/Annex IV species. To the best of our knowledge, the existing potting and aquaculture operations do not include geophysical survey activities.

In relation to the proposed geotechnical site investigations, the proposed geotechnical sampling events are likely to cause insignificant deposition levels and an estimated area of only 1-2 m² is expected to be affected per borehole, representing the likely footprint of the drill pipe penetration equipment itself. As such, the proposed site investigations are expected to induce low levels of disturbance and deposition levels that are within storm background levels of sediment migration and are therefore it is considered unlikely that any increase in suspended sediments due to in-combination effects would impact upon conservation features of the Natura 2000 sites.

Submission 13: Engineering Inspector and Marine Advisor

"Assessment & Conclusion

The foreshore the subject of this application off the west coast is state owned, there are no conflicts with existing licences, leases or applications and the works as proposed are in the public interest and consistent with the NMPF. The works if completed as proposed and in accordance with the conditions set out below will not have significant adverse impacts on the public use of, access to and enjoyment of the foreshore, navigation, fisheries or the environment (subject to MLVC confirmation).

Recommendation

I have no objection to the granting of Foreshore Licence under Section 3 of the Foreshore Act for this application subject to the following conditions; ..."

Clarus Offshore Wind Farm Ltd. Response: Clarus Offshore Wind Farm Ltd. notes the Engineering Inspector and Marine Advisor's submission and welcomes their comment that they have no objection to the application for Foreshore Licence FS006886.

If I can be of any further assistance, please do not hesitate to contact me.

Yours sincerely,

[Redacted Signature]

[Redacted Name]

Environment Project Manager

