# Foreshore Licence Application (Offshore Renewable Energy)

Please indicate project category as appropriate:	
Wave:	
Tidal:	
Wind:	
X	
Other:	
Please specify:	

#### **DATA PROTECTION**

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#### **Applicant Name and Address:**

Full Name of Applicant (not Agent):
Shelmalere Offshore Wind Farm Limited
c/o Edwina White
Company/Organisation:
Shelmalere Offshore Wind Farm Limited

**Address:** c/o DP Energy, Mill House, Buttevant, Co. Cork, Ireland

**Eircode**: P51 TN35

#### **Applicant Contact Details:**

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**E-mail address:** shelmalere@dpenergy.com

#### Nominated Contact (Where different from above):

Name: N/A

Address: N/A

Phone No: N/A

E-mail address: N/A

#### **Applicant's Legal Advisor:**

Name: Marie MacKenzie

Address: c/o DP Energy, Mill House, Buttevant, Co. Cork, P51 TN35

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#### Part 1: Proposal Details (Attach additional documents as required)

# 1.1 Provide background information on the project including reason and objectives of the site investigations, the site selection process and any proposals for future activities at the site.

Shelmalere Offshore Wind Farm Ltd., a subsidiary project company of DP Energy Ireland (DPEI), is investigating the feasibility of developing an offshore wind farm off the east coast of Ireland, Shelmalere Offshore Wind Farm (OWF). Shelmalere Offshore Wind Farm is a key part of a wider strategic development of a portfolio of wind (and wave) sites that DPEI is planning.

Shelmalere Offshore Wind Farm Ltd. is applying for a licence to undertake a full suite of site investigations at a site in the south-west Irish Sea. This includes hydrographical and geophysical survey activities (MBES, SSS, SBP, Magnetometer), geotechnical survey activities (boreholes, vibrocores and cone penetration tests) and ecological survey activities (incl. benthic and intertidal sampling, CPODs, Soundtraps) as well as potential deployment of metocean devices (Floating LiDAR, ADCPs and Wave Buoys). The site is located within the

12 nautical mile (NM) limit (i.e. within the foreshore). This Foreshore Licence Application is for site investigation activities within the area to be investigated for a wind turbine array (Array Investigation Area) and within the area to be investigated for associated export cables and electrical infrastructure (Cable Investigation Area). The types of survey methods that may be employed throughout the proposed site investigations are set out in Section 1.4 of this application form and in the documentation provided in support of this application (Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment and Shelmalere Offshore Wind Farm Foreshore Licence Application: Schedule of Activities).

The Foreshore Licence Application Area, comprising the Array Investigation Area and the Cable Investigation Area, is located in the Irish Sea off the coast of counties Wicklow and Wexford. The total Foreshore Licence Application Area measures 639.66km² in total. The Foreshore Licence Application Area is broken up into the Array Investigation Area (298.29km²) and the Cable Investigation Area (341.37km²). The Array Investigation Area, at its closest point, is 9.0 km from shore at Rosslare Harbour in County Wexford. The Cable Investigation Area extends to the mean high-water mark, in parts, along the coast.

Shelmalere Offshore Wind Farm Ltd. identified the area east of the coast of counties Wicklow and Wexford as having potential to be suitable for an offshore wind farm site with the main advantages of the Foreshore Licence Application Area including the following:

- Suitable water depths (<70m), relatively close to shore;
- Favourable wind resources;
- Optimal wave resource; and
- Relatively low levels of environmental constraints.

The site investigation activities are proposed with the aim to:

- Obtain up to date high-resolution water depth measurements across the site;
- Obtain information on the seabed surface (type, texture, variability, etc.)
  and in particular, to identify any seabed features that may be of interest to
  the overall project;
- Identify any shallow geohazards and man-made hazards (including but not limited to outcropping, boulders, shallow gas, wrecks, debris etc.);
- Determine the stratigraphy across the site and quantify the variability in the lateral and vertical extents to depths of up to approximately 50m below seabed, if necessary;
- Identify the presence of bedrock should it exist within the top 50m;
- Identify any magnetic anomalies;
- Identify marine habitat areas as the basis for benthic survey to be carried out;
- Identify sensitive marine habitats which will need to be avoided during geotechnical and environmental sampling.
- Acquire comprehensive understanding of metocean conditions at the proposed Foreshore Licence Application Area;

- Minimise uncertainty in ground conditions to inform detailed design for future development;
- Obtain detailed environmental data across the Foreshore Licence Application Area;
- Enable the preparation of an Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) in support of a future development consent application for an offshore windfarm (Shelmalere Offshore Wind Farm).

While it is the intention to begin site investigation activities as soon as possible following licence award (aiming for spring 2022), the site investigation campaigns may extend over multiple years. A phased approached may be required to maximise survey weather windows and to facilitate project planning. The survey activities may be split into separate campaigns as different vessels may be required for shallow water near the coast and different parameters may be required for the survey equipment dependent on the survey design and the desired outcomes.

The baseline information gathered from the site investigation activities proposed as part of this Foreshore Licence Application, together with an involved stakeholder engagement process, will facilitate detailed project design and refined site selection.

#### 1.2 Possible MW output of final development:

The potential MW output of a wind farm in the Foreshore Licence Application Area would be subject to the findings of the site investigation. However, the possible MW output of the final development is currently anticipated to be up to 1GW.

### 1.3 Type of surveys proposed (e.g. geophysical, geotechnical, archaeological or benthic)

Hydrographical and geophysical survey activities including:

- Multi-Beam Echo Sounder
- Side Scan Sonar
- Sub-Bottom Profiling
- Magnetometer
- Higher Energy Sound Sources (only if sufficient depth data not obtained with other sub-bottom profiling methods)
- Geotechnical Surveys including: Boreholes, Cone Penetration Tests and VibroCores.
- MetOcean devices (including the moorings and anchor) to determine wind, wave, current and other sea state parameters.

• Ecological Surveys including benthic surveys (subtidal benthic survey, intertidal habitat walkover survey) and Marine Mammal Acoustic Monitoring.

### Survey methodologies and equipment to be used for each survey type proposed:

The table below summarises the proposed programme of surveys to be undertaken within the Foreshore Licence Application Area. For further details, please see document included with this submission and entitled: Shelmalere Offshore Wind Farm Foreshore Licence Application: Schedule of Activities

Survey	Methods	Purpose
	Multibeam Echosounder (MBES)	MBES is a system for collecting detailed topographical data of the seabed. Typical equipment includes the Kongsberg EM3002D multi-beam system with mounting system including AML SV Smart Probe, Kongsberg EM 2040 or similar. For these surveys the equipment will operate at a typical central frequency of 200 - 400kHz (700kHz optional) with sound pressure levels in the range of 200-228dB re1μPa @1m.
	Side Scan Sonar (SSS)	SSS surveys are used to determine sediment characteristics and seabed features. The GeoAcoustics 160 system, Klein 3000 series SSS Dual Frequency or the Edgetech 4200 may be taken as an indicate example of an SSS device and for these surveys will have a typical operating frequency range of approximately 300 to 900 kHz with sound pressure levels of 228dB re1µPa @1m. Frequencies of 200kHz may be used in shallower waters.
Hydrographical and Geophysical Metocean	Magnetometer	A magnetometer is used to identify magnetic anomalies and hazard mapping for metal obstructions, shipwrecks and unexploded ordnance on the surface and in the shallow sub-surface. It is completely passive in operation (i.e. it does not emit any sound into the marine environment). The marine magnetometer will be of the Caesium Vapour type and capable of recording variations in magnetic field strength during survey to an accuracy of±0.5nT. The Geometrics G-882 can be taken as an indicative equipment example.
	Sub-bottom Profiling (SBP)	SBP is used to develop an image of the subsurface, identifying different strata encountered in the shallow sediments. SBP determines the physical properties of the sea floor and characterises the geological information below the sea floor. It is likely that two different systems will be used; a high-resolution profiler that will emphasise the top 3 to 5m of sediment with a resolution of 0.25m or better in a variety of geological conditions; and a system that provides increased penetration between 50 and 100m. Potential equipment includes GeoAcoustics 5430A profiling system, Edgetech 3100, EdgeTech 3200 XS.  The Innomar SES-2000 Medium is an indicative example of a parametric system with a primary and secondary frequency range of 85-115kHz and 2-22kHz, respectively,

		and sound pressure levels of up to 247 dB (typically operated at <200dB) re1µPa @ 1m.
		The Seatronics Edgetech 3300 is an indicative example of a hull-mounted pinger system with an operating frequency range of approximately 2-16 kHz with sound pressure levels of 200dB re1µPa @1m.
		The Applied Acoustics AA301 is an indicative example of a boomer, with sound pressure levels in the range of 208-215dB re1µPa @ 1m.
		The Geo-Source 200 lightweight or the Applied Acoustics Squid 500 are indicative examples of sparker systems used in sub-bottom profiling, with sound pressures in the range of 204-216dB re1µPa @1m.
	Higher Energy Sound Sources (for example: Sparker	Sub-surface acoustic surveys are used to image the subsurface and categorise sediment strata. These surveys can create 2D or 3D images of the subsurface. The intensity of the source varies depending on the
	eSource)	requirements of the survey. Higher energy sub-surface sources used in multi-channel surveys will only be used if sufficient depth data is not achieved with the use of the Sub-bottom profiling methods. Typical Equipment includes the Applied Acoustics Squid 2000 Sparker system (sparker/boomer), Applied acoustics boomer plate AA251/AA301 or similar, Seismic Energy Source Applied Acoustics CSP-L or similar. Expected Frequency Band: 2-
Geotechnical	Boreholes (BH)	16kHz, 4-24kHz  Up to 117 no. boreholes will be required covering both the preliminary and interim campaigns (i.e. two geotechnical survey campaigns) within the Foreshore Licence Application Area. Boreholes may be up to 80m deep within the array investigation area however within the cable investigation area they will likely be around 20m deep. All drilling equipment used will follow the ISO and API technical specifications for drilling equipment.
	Cone Penetration Tests (CPT)	CPTs are a method for testing the soils strength parameters. CPTs can be performed as either Seafloor CPTs or as Down Borehole CPTs. Up to 113 no. CPTs will be required covering both the preliminary and interim campaign within the Foreshore Licence Application Area.
	Vibrocore (VC) / Gravity Corer	Vibrocore and Gravity Corer are methods of collecting unconsolidated seabed samples. Up to 113 no. sample locations will be required covering both the preliminary and interim campaigns for either vibrocore or gravity sampling within the Foreshore Licence Application Area.
	Floating LiDAR	Up to 2 floating LiDAR buoys may be deployed to measure the wind resource within the array investigation area. Deployment of these buoys will include anchor points on the seafloor.
Metocean	Acoustic Doppler Current Profiler (ADCP)	Up to 5 ADCPs may be used to examine wave and current conditions in the Foreshore Licence Application Area. This equipment is installed on the seabed and anchored with a suitable mooring structure. It is generally a short-term deployment used to gather seasonal data (e.g. winter storm data) however may be deployed for longer.
		Sound Sources (for example: Sparker systems, eSource)  Cone Penetration Tests (CPT)  Vibrocore (VC) / Gravity Corer  Floating LiDAR  Acoustic Doppler Current Profiler

Provide info arrangemen All equipment of lit as required of Commissioner of	rmation on pro its for any prop deployed under t under navigation of Irish Lights.	oposed mooring, marking and lighting posed deployment of instrument arrays.  The Foreshore Licence shall be moored, marked and hal safety requirements and in consultation with the loes the applicant hold any previous
Provide info arrangemen All equipment of lit as required of	rmation on pro its for any prop deployed under t under navigation	the Foreshore Licence shall be moored, marked and
Provide info arrangemen	rmation on pro	posed deployment of instrument arrays.
Provide info	rmation on pro	
		posed mooring, marking and lighting
	LUVIUES DIODOSE	a unuer uns roresnore Licence Application.
		emporary deployments associated with the site
		osed under this Foreshore Licence Application. These
buoys may be o	deployed within t	the Foreshore Licence Application Area as part of the
		rray Investigation Area, accompanied by a marker deployed on the seafloor and up to two wave rider
		to two floating LiDAR buoys (Seawatch or similar)
Farm Foreshor	e Licence Appl	ication: Schedule of Activities, Section 4 which
		rt of the site investigation activities proposed under tion. As described in the Shelmalere Offshore Wind
		ion is for site investigation activities only. There will
		-
	<del>-</del>	uitability of the site. Is the structure
		ale of any structure to be erected on the
		following an underwater archaeology risk assessment.
	(Grobs)	to 2 CPODs. The exact locations will be determined
	Monitoring (CPODs)	of the site may make some areas unsuitable for deployment. Figure 1-2 includes indicative locations of up
	Acoustic	site investigation campaign. The strong currents in parts
	Marine Mammal	deployed on the seabed. Sound Trap hydrophones may be deployed alongside the CPODs for periods throughout the
	Marino	using CPODs (click detectors). These CPODs will be
		Marine mammal acoustic monitoring will be undertaken
		Foreshore Licence Application Area and multiple samples will be taken at each location.
Ecology		video in advance of sampling. There will be up to 128 no sampling locations within the
	survey)	Subtidal sample locations may be subject to drop down
	walkover	sampling where appropriate.
		will be identified by means of intertidal habitat mapping with core/quadrat sampling and hard substrate quadrat
	benthic survey,	In the intertidal area features of conservation importance
	(subtidal	form of biotope mapping).
	Benthic Ecology	of the Cable Investigation Area and landfalls of the cable with identification of the main habitats present (in the
		This may consist of the intertidal Phase I walkover survey
		communities and habitats at the site.
		structure.  This survey is designed to identify the expected benthic
		be moored to the seabed by a suitably sized mooring
	Wave Buov	wave heights and direction to feed into the detailed design of the project within the array investigation area. They will
		Up to 2 wave rider buoys may be deployed to measure
	Describe the foreshore for proposed to  This Foreshore be no structure this Foreshore Farm Foreshore accompanies the may be deployed buoy, up to 5 buoys may be desite investigation devices representations.	Describe the nature and so foreshore for testing the se proposed to be temporary  This Foreshore Licence Applicate be no structures erected as pathis Foreshore Licence Applicate Farm Foreshore Licence Application up may be deployed within the Abuoy, up to 5 ADCPs may be abuoys may be deployed within the Site investigation activities proposed to bus application activities prop

### over any other area? (Give details including Department's file reference number(s)).

The applicant's parent company, DP Energy Ireland, has set up a number of Special Purpose Vehicles for the development of offshore renewable energy projects off the coast of Ireland. These include: Inis Ealga Marine Energy Park Ltd.; Shelmalere Offshore Wind Farm Ltd.; Latitude 52 Offshore Wind Farm Ltd.; and Clarus Offshore Wind Farm Ltd. Foreshore Licence Applications have been submitted as follows by each of those Special Purpose Vehicles:

- 1. Inis Ealga Marine Energy Park Ltd.: A Foreshore Licence Application (FS006859) for site investigation activities relating to a potential offshore wind farm, Inis Ealga Marine Energy Park, off the coast of counties Cork and Waterford was submitted to the Department in October 2019 and went through public consultation from 11th March 2020 to 4th June 2020. That application is progressing through the Foreshore Consent Process and is expected to go to assessment by the Department's Independent A separate Foreshore Licence Environmental Consultants shortly. Application (FS007404) was submitted 30th July 2021 to carry out Site Investigation Works for an additional potential export cable corridor in connection with Inis Ealga Marine Energy Park. This cable corridor has been identified for site investigation due to the precedence established by the Celtic Interconnector development (ABP consent application ref. A04.310798) and feedback to DPEI from stakeholders requesting greater consideration of those areas already under development for other projects such as the Celtic Interconnector.
- 2. Latitude 52 Offshore Wind Farm Ltd.: A Foreshore Licence Application (FS007232) for site investigation activities relating to a potential offshore wind farm off the coast of counties Wicklow and Wexford was submitted to the Department on 11<sup>th</sup> December 2020 and is currently being assessed by the Water and Marine Advisory Unit for approval to proceed to public consultation.
- 3. Clarus Offshore Wind Farm Ltd.: A Pre-application Form for site investigation activities relating to a potential offshore wind farm off the coast of counties Clare and Kerry was submitted to the Department in 2018. A Foreshore Licence Application was subsequently submitted (FS006886).

### 1.8 Indicative timing of the investigation activities: (i) Start date (ii) Duration (iii) Any other information relevant to timing.

The intention is to commence the site investigation activities as soon as feasible following award of a Foreshore Licence (spring/summer 2022), with a staged programme of site investigations over the next number of years to capitalise on suitable weather windows over this time period. This phased approach will progress the overall development towards detailed design stage. The exact

mobilisation dates for the site investigation activities will not be known until a Foreshore Licence has been secured and the process of procuring the contractor is complete.

While a multi-year licence is sought, most survey periods will be a period of weeks in duration, with the exception of the metocean devices (LiDAR, ADCPs and Wave Buoys) which may be deployed for longer. The time spent at each individual location will be a maximum of hours for other site investigation activities such as Boreholes, CPTs, Vibrocores, Gravity Coring, Grab Sampling etc. Further information on the typical durations for each site investigation activity is set out in the 'Shelmalere Offshore Windfarm Foreshore Licence Application: Schedule of Activities' document which accompanies this Foreshore Licence Application (See Section 11 of that document).

# 1.9 Describe any likely interactions with activities of the public or other foreshore users during the investigative activities (e.g. fishing, aquaculture, sailing, and surfing). Describe any measures proposed to minimise inconvenience to other users.

Access to the shore/beach: Until the preferred survey contractor is procured, the geophysical survey is complete, and a preferred cable landfall location is identified, it is not possible to determine if access to and from the shore will be restricted during any of the subsequent site investigation activities. However, it is possible that a survey of a location within the intertidal area will be required. Any restrictions on any beach will be limited in duration (i.e. one to two weeks) and minor in nature.

In order to minimise inconvenience, to reduce any potential environmental effects and to ensure all foreshore users are kept up to date with the site investigation activities, the following measures will be adopted:

- Shelmalere Offshore Wind Farm Ltd. will ensure that all vessels taking part in the investigation activities comply with marine certification requirements;
- Shelmalere Offshore Wind Farm Ltd. will issue a Notice to Mariners to the Maritime Safety Directorate and nearby ports and harbours requesting that vessels keep a safe distance from the site investigation activities and to inform other maritime users of the schedule of activities;
- Shelmalere Offshore Wind Farm Ltd. has appointed a Fisheries Liaison Officer (FLO) to act as a first point of contact with fishers on behalf of the project. Shelmalere Offshore Wind Farm Ltd. has been working with its FLO since their appointment to build relationships with fishers and to bolster the publicly available information on the type and extent of fishing within the site. Engagement with fishers continues and will continue ahead of and during any survey effort.
- Shelmalere Offshore Wind Farm Ltd. is committed to fully engaging with all stakeholders at all stages of the project and DP Energy's Community and Stakeholder Liaison Manager, who has been working on the project since 2020, will continue to lead on this.

Each period of the site investigations will be of a limited extent and duration and any effects will be very localised.

### 1.10 Describe any consultations undertaken to date with other foreshore users.

DPEI has commenced engagement with the fishing community and with other foreshore users and coastal communities both through the Fisheries Liaison Officer appointed to the project since 2020 and via DP Energy's Community and Stakeholder Liaison Manager also working on the project since 2020.

Meetings have been held and are ongoing with Seal Rescue Ireland (Courtown) Courtown Community Development Council, Tara Glen Golf and Country Club, Wicklow Sailing Club, Coastwatch Ireland, Blue Horizon, Cork Nature Network, DPEI have been represented on various slots in local press and on local radio to inform other foreshore users and the general public of project development.

DP Energy have appointed a Community Liaison Officer (CLO) to further engage with communities potentially affected by or who may have interest in the project development. DP Energy will continue to work to keep members of the public, any interest groups and relevant bodies informed and engaged before and during the proposed surveys.

DP Energy have contracted a STEAM (Science, Technology, Engineering, Arts and Maths) Education service provider to conduct 'Climate Change and Engineering' workshops with a specific focus on offshore wind to 5<sup>th</sup> and 6<sup>th</sup> class, primary schools in the vicinity of Shelmalere Offshore Wind Farm.

## 1.11 Describe any consultations undertaken to date with other consent authorities e.g. planning authority, Commission for Energy Regulation etc.

In January 2021, a series of meetings was held with stakeholders specific to the scope and methodologies associated with the onshore and offshore ecology survey effort for Shelmalere Offshore Wind Farm. Wexford County Council attended one of these meetings. Feedback was taken from Wexford County Council to help inform scope of ecology surveys (that do not require Foreshore Licence) now underway.

DPEI have presented at the Arklow Municipal District Council Monthly Executive Meeting. Feedback gained from that meeting was used to inform operations.

DPEI have met with Commissioners of Irish Lights (CIL) to inform and receive feedback relating to Shelmalere Offshore Wind Farm.

Direct consultation with Eirgrid, CRU and DECC (formerly DCCAE) has been undertaken on Shelmalere Offshore Wind Farm as part of a wider portfolio of offshore wind projects under development by DP Energy Ireland.

# 1.12 Describe briefly any consultations undertaken with relevant authorities (e.g. county council, port/harbour authority etc) or State Agencies e.g. National Parks & Wildlife Service (NPWS), National Monuments Service (NMS) of Department of Arts, Heritage and the Gaeltacht:

In January 2021, a series of meetings was held with the following stakeholders specific to the scope and methodologies associated with the onshore and offshore ecology survey effort for Shelmalere Offshore Wind Farm. Those stakeholders included: National Parks & Wildlife Service (NPWS), BIM-Aquaculture, Irish Whale & Dolphin Group, Ocean Research & Conservation (ORC) Ireland and SEAI. Feedback was taken from those stakeholders to help inform scope of ecology surveys (that do not require Foreshore Licence) now underway.

Separately, consultation has also been ongoing with Bord Iascaigh Mhara, and The Marine Institute, Eirgrid, Wicklow County Council, Arklow Municipal Council and Wexford County Council, Rosslare Europort, Wicklow Harbour, Arklow Harbour and Kilmore Quay Harbour.

### 1.13 Describe briefly any support received or under application with the Sustainable Energy Authority of Ireland (SEAI) or other State Agency:

The Shelmalere Offshore Wind Farm has not received any support nor is it under application with the Sustainable Energy Authority of Ireland (SEAI) or other State Agency.

Part 2: Proposed Site. (Attach additional documents as required)

# Delineate the proposed site in red on a latest edition map at a scale of 1:10 000 or larger scale if more appropriate and available, indicating: Please see "Foreshore Licence Map (SHEL:FSMAP1:03)" accompanying this application.

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	System: UTM30N 32630		System: WGS84 4326		System: ITM95 2157	
Point No	X Y		Х	X Y		Υ
1	296164.48	5829928.67	-6.0086	52.5811	734952.84	649623.16
2	299294.77	5823986.84	-5.9589	52.5289	738486.89	643912.66
3	303126.23	5817848.10	-5.8989	52.4752	742733.85	638053.89
4	302471.65	5816849.16	-5.9079	52.4660	742149.94	637012.08
5	302392.94	5816574.84	-5.9089	52.4635	742090.39	636732.97
6	302392.59	5816573.62	-5.9089	52.4635	742090.13	636731.73
7	302391.68	5816572.48	-5.9089	52.4635	742089.30	636730.53
8	302219.06	5816355.02	-5.9113	52.4615	741932.13	636501.66
9	302006.06	5815850.10	-5.9142	52.4569	741754.57	635983.22
10	301571.51	5815036.03	-5.9201	52.4494	741377.36	635141.07
11	298808.19	5811475.39	-5.9585	52.4164	738866.88	631398.02
12	298770.58	5811344.29	-5.9590	52.4152	738838.42	631264.64
13	297601.86	5809875.31	-5.9753	52.4016	737774.07	629718.47
14	297560.83	5809732.29	-5.9758	52.4003	737743.02	629572.96
15	297245.59	5809306.50	-5.9802	52.3964	737457.97	629126.43
16	297194.28	5809127.66	-5.9808	52.3948	737419.15	628944.48
17	296897.37	5808754.45	-5.9849	52.3913	737148.75	628551.67
18	295680.96	5807162.62	-6.0018	52.3766	736045.29	626879.70
19	295680.60	5807162.16	-6.0018	52.3766	736044.96	626879.22
20	295680.57	5807162.06	-6.0018	52.3766	736044.94	626879.12
21	295618.24	5806944.74	-6.0026	52.3746	735997.77	626658.02
22	295406.39	5806678.47	-6.0055	52.3721	735804.84	626377.77
23	295291.71	5806481.50	-6.0071	52.3703	735704.04	626173.37
24	295251.28	5806340.58	-6.0076	52.3690	735673.45	626030.00
25	294575.82	5805419.43	-6.0170	52.3605	735063.27	625064.46
26	294521.64	5805230.50	-6.0176	52.3588	735022.27	624872.26
27	294351.35	5805016.44	-6.0200	52.3568	734867.18	624646.96
28	294207.11	5804782.68	-6.0220	52.3546	734739.44	624403.82
29	294152.96	5804593.84	-6.0227	52.3529	734698.46	624211.71
30	293639.14	5803866.74	-6.0297	52.3462	734236.12	623450.92
31	293639.10	5803866.69	-6.0297	52.3462	734236.08	623450.87
32	293639.09	5803866.67	-6.0297	52.3462	734236.07	623450.85
33	293614.98	5803620.17	-6.0299	52.3440	734229.04	623203.29
34	289587.41	5798355.12	-6.0857	52.2952	730574.88	617673.32

2 3	59	296164.48	5829928.67	-6.0086	52.5811	734952.84	649623.16
	58	290999.88	5855070.22	-6.1007	52.8049	728057.13	674343.60
	57	290509.26	5856066.79	-6.1086	52.8136	727498.52	675303.56
	56	290136.82	5856823.37	-6.1146	52.8203	727074.45	676032.34
	55	289904.66	5857012.16	-6.1182	52.8219	726829.77	676204.52
	54	287808.87	5851296.65	-6.1455	52.7697	725136.32	670358.00
	53	290277.39	5850973.02	-6.1088	52.7678	727621.03	670206.60
	52	290808.36	5847888.71	-6.0990	52.7403	728364.78	667166.96
	51						
	50	290970.86	5842400.95	-6.1072	52.6911	728907.65	661704.32
	49	289980.85	5841670.45	-6.1419	52.7203	727970.81	660907.00
	48	287811.70	5845790.02	-6.1419	52.7203	725521.38	664865.63
	47	286663.83	5845366.22	-6.1586	52.7161	724405.85	664363.26
	46	281755.61	5837538.65	-6.2260	52.6438	720053.13	656215.46
	45	282073.04	5835355.33	-6.2290	52.6241	719905.22	654017.01
	44	282673.64	5832811.44	-6.2093	52.6018	721736.40	651564.10
	43	282927.29	5830112.72	-6.2038	52.5777	721736.40	648889.92
	42	282927.29	5830112.10	-6.2038	52.5777	721736.35	648889.29
	41	283517.29	5829978.03	-6.1950	52.5767	724379.83	648796.43
	40	285421.05	5824968.42	-6.1638	52.5325	724579.85	643931.47
	39	287573.46	5823569.32	-6.1312	52.5208	724340.06	642684.91
	38	284052.51	5808695.39	-6.1734	52.3859	724340.06	627605.35
	37	282543.12	5795532.55	-6.1870	52.2271	724550.20	614371.93
	36	285980.11 283042.38	5790630.49 5791049.54	-6.1336 -6.1768	52.2244 52.2271	727509.37 724550.20	609719.30 609934.78
	35	287239.50	5793871.44	-6.1172	52.2540	728542.14	613038.92

#### 2.3 Delineate proposed site on relevant Admiralty Chart.

See "Foreshore Licence Map SHEL:FSMAP1:03".

#### 2.4 Relevant Local Authority:

Wexford County Council

Wicklow County Council

#### 2.5 Location name and nearest townland name:

As the Foreshore Licence Application Area is bounded by the High-Water Mark along the coasts of counties Wexford and Wicklow, a considerable number of coastal townlands are directly adjacent to the site boundary. The Cable Investigation Area extends up to the High-Water Mark of a number of townlands in County Wexford and also Arklow Town. In addition, the Array Investigation Area may be within sight of a number of townlands. Relevant townlands are listed below:

Arklow

Kilmichael Castletown Ballymoney Kiltennel Courtown Riverchapel Ardamine Glendoyne Ballygarret Cahore Kilmuckridge Blackwater Ballyvaloo Curracloe Wexford Drinagh Rosslare Strand Rosslare Harbour St Helens 2.6 Distance from nearest other developments, including any offshore renewable energy developments on the foreshore: As indicated in the "Shelmalere Offshore Wind Farm Limited Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment (Section 3.5, Figure 3-15): (FS006788) The Cable Investigation Area has a significant overlap with the Hibernian Wind Power – Kilmichael Point - (FS007331) The Cable Investigation Area has a significant overlap the Sure Partners Site Investigations at Arklow Bank site investigation area. (FS006960) Trinity Wharf in Wexford Harbour at Wexford Town is approximately 18 km east of the Shelmalere Foreshore Licence Application

(FS006862) Arklow Waste-Water Treatment Plant is just north of the

Shelmalere Cable Investigation Area at Arklow Harbour.

#### 2.7 Distance from shore:

The Foreshore Licence Application Area is bounded by the High-Water Mark along part of the Wexford coast and a small section of the Wicklow coast. The Foreshore Licence Application Area, at its closest point, is approximately 9.0 km from Rosslare Europort. Please see Foreshore Licence Map (SHEL:FSMAP1:03) accompanying this application for further detail of the site outline.

#### 2.8 Distance from nearest aquaculture operation:

The closest aquaculture operation to the Foreshore Licence Application Area is located near Arklow Harbour and is over 2 km from the Cable Investigation Area at its nearest point. Further information may be found in the Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment document which accompanies this application.

### 2.9 Distance from any other sensitive location e.g. fish spawning ground, designated Shellfish Growing Waters.

Please see Chapter 3 of the document submitted in support of this application as "Shelmalere Offshore Wind Farm Limited Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment" for available information pertaining to fisheries within the Foreshore Licence Application Area.

The closest designated shellfish waters are mussel waters in Wexford Harbour, both immediately north and south of Wexford Bridge, which are over 15 km from the Array Investigation Area (Chapter 3, Figure 3-10).

Ireland's Marine Atlas and VMS data indicate that both potting with crab, lobster, shrimp and whelk fishing overlap the Cable Investigation Area and the Array Investigation Area with overall relatively low effort in the Foreshore Licence Application Area except for most eastern area of Array Investigation Area (Chapter 3, Figure 3-3 and Figure 3-5). Ireland's Marine Atlas and VMS data also indicates that dredge fishing takes place nearer the Irish coast west of the Foreshore Licence Application Area and within the Cable Investigation Area where the highest effort is recorded, with a relatively small effort of dredge fishing within the Array Investigation Area (Chapter 3, Figure 3-4 and Figure 3-6). Based on the VMS data for the site obtained from the Marine Institute and mapped as Figure 3-2, some pelagic trawl effort, falling within the minimum recorded range of fishing effort of 0-10 hours/km2/year, is evident to the south-west of the Array Investigation Area and along the coast within the Cable Investigation Area. Ireland's Marine Atlas and VMS data indicates that there is some bottom and beam trawl effort, again mostly within the minimum recorded range of fishing effort, scattered throughout the Array Investigation Area and the eastern edge of the Cable Investigation Area.

Distribution of different fishing methods adjacent to and overlapping the Foreshore Licence Application Area are presented in Figure 3-2 – Figure 3-6 of the document "Shelmalere Offshore Wind Farm Limited Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment"

submitted in support of this application. These figures have been mapped from VMS data covering the years 2015-2019 obtained from the Marine Institute for the Foreshore Licence Application Area and surrounding area. In addition, shellfish fishing effort and dredge and pot fishing areas (both for 2014-2018 for vessels =>12m in length (Figure 3-7) and less than 15m in length (Figure 3-8)) is shown in Figure 3-7 and Figure 3-8 in the "Shelmalere Offshore Wind Farm Limited Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment.

Shelmalere Offshore Wind Farm Limited acknowledges that there are significant gaps in fisheries information publicly available for the Irish Sea. It is noted that there may be other areas of fishing relevant to the Foreshore Licence Application Area that are not recorded in Ireland's Marine Atlas and Shelmalere Offshore Wind Farm Ltd. has appointed a Fisheries Liaison Officer (FLO) for the project to engage directly with local fishers to determine the full extent of fishing activity within the Foreshore Licence Application Area. As part of their work, the FLO has obtained VMS data for the Foreshore Licence Application Area from the Marine Institute which has now been mapped and included in Chapter 3 of the "Shelmalere Offshore Wind Farm Limited Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment".

The table below taken from information available through Ireland's Marine Atlas (accessed August 2021) shows the species for which publicly available data shows nursery and spawning areas to occur within the Foreshore Licence Application Area.

Species	Nursery Area	Spawning
Horse Mackerel	YES	X
Nephrops	X	X
Blue Whiting	X	X
Atlantic Cod	YES	X
Monkfish	X	No Data
Haddock	X	X
Whiting	YES	YES
Hake	X	X
Megrim	X	X
Mackerel	YES	X
Herring	X	X

#### 2.10 Any other site details considered relevant:

As part of the preparation for this Foreshore Licence Application, a desktop study was carried out on various sources to identify both infrastructure and historical wrecks in the Foreshore Licence Application Area. Further information is available in Section 3 of the "Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment" submitted in support of this application.

Specifically, the location of subsea cables is shown in Figure 3-13 of the "Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment"

Shipwreck data, available through both the National Monuments Database and the INFOMAR project, is shown in Figure 3-14 of "Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment"

### Part 3: Nature Conservation Considerations (Attach additional documents as required)

### 3.1 Distance from nearest Natura 2000 sites (i.e. Special Protection Area (SPA) or Special Area of Conservation (SAC):

The approach to Natura 2000 site selection is evaluated on case-by-case basis, adopting the precautionary principle.

As described in Chapter 5 and Chapter 6 of the "Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment", sites have been screened in for Stage 1 Appropriate Assessment Screening based on the Source-Pathway-Receptor model. The distance at which these sites, or their Qualifying Interests/Species of Community Interest, may be affected by the potential impacts identified for the proposed site investigation activities (Potential impacts described in Chapter 4 of the Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment) is dependent on the nature of the Qualifying Interests/Species of Community Interest. The rational for including sites in screening is fully described in the document submitted in support of this application and entitled "Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment" (see Chapter 5 and Chapter 6 of same).

There are no SPAs overlapping the Foreshore Licence Application Area. The SPAs considered relevant to the Foreshore Licence Application Area in the context of the proposed activities are set out in Chapter 5 and Appendix II and III of the document submitted in support of this application and entitled "Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment document provided in support of this application".

As stated in Section 5.2 of the same report, due to the nature of proposed site investigation activities which have very localised and temporary effects, only Special Areas of Conservation that overlap the Foreshore Licence Application Area would be relevant for assessment of effects on their Qualifying Interests Annex I Habitats. Since the Foreshore Licence Application Area does not overlap with any Special Areas of Conservation, none are included in the Stage 1 Appropriate Assessment Screening in terms of their benthic habitats as no link exists between the proposed activities and the European site under the Source-Pathway-Receptor model.

SACs with marine (or partially marine) based mobile Qualifying Interests were considered within Irish management units (Irish Sea and Celtic Sea) taking into account foraging distances for individual species. Foraging distances and distribution of marine mammal species is discussed in Section 5.2.2 of the document submitted in support of this application as "Shelmalere Offshore Wind Farm Limited Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment". Considering the temporary and localised effects of the site investigation activities, combined with the information included in Section 5.2.2 of the report referenced above, this approach is considered sufficient for the consideration of SACs with respect to their mobile Qualifying Interests with a marine presence.

Distances from the Foreshore Licence Application Area to all relevant SACs and the SPAs which are considered in terms of both the habitat feature (wetlands and waterbirds [999] as well as their Species of Community Interest) are set out in Section 3.2 of this application form. In addition, a further 61 SPAs in four jurisdictions (Ireland, UK, France and Spain) were considered due to the presence of birds that are known to forage over long distances and which may be sensitive to disturbance from site investigation activities and/or sensitive to underwater noise generated by survey equipment. This list of relevant SPAs, their relevant SCIs as well as their distance from the Foreshore Licence Application Area is set out in Appendix II and III of the document submitted in support of this application as "Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment."

A full appraisal of these Natura 2000 is set out in the document ""Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment" submitted in support of this application.

#### 3.2 Name and location of Natura 2000 sites in or around the project area:

The table below summarises all Natura 2000 Sites relevant to the application and proposed activities.

Name	Distance (km) from Array Investigation Area (km)	Distance (km) from Cable Investigation Area (km)
Cahore Marshes SPA(004143)	12.47	1.42
The Raven SPA (004019)	8.46	8.47
Wexford Harbour and Slobs SPA (004076)	12.72	13.30
Lady's Island Lake SPA (004009)	12.12	23.63
Slaney River Valley SAC (000781)	12.10	8.42

Saltee Islands SAC (000707)	22.94	31.66
Rockabill to Dalkey Island SAC (003000)	47.57	79.68
Lambay Island SAC (000204)	105.76	73.62
Lower River Suir SAC (002137)	56.1	58.2
River Barrow and River Nore SAC (002162)	36.9	46.0
Pembrokeshire Marine/ Sir Benfro Forol SAC (UK0013116)	53.36	67.26
West Wales Marine / Gorllewin Cymru Forol SAC (UK0030397)	40.25	44.87
Blackwater River (Cork/Waterford) SAC (002170)	103.9	107.8
Cardigan Bay/ Bae Ceredigion SAC (UK0012712)	67.40	73.69
North Anglesey Marine / Gogledd Môn Forol (UK0030398)	79.94	101.92
Lleyn Peninsula and the Sarnau / Pen Llyn a`r Sarnau	75.88	78.16
River Boyne and Blackwater SAC (002299)	120.0	90.0
North Channel SAC (UK0030399)	186.0	157.1

### Describe potential impacts of the site investigations on Natura 2000 sites.

A document entitled "Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment" is provided in support of this application. The work undertaken in preparing this supporting information found that the activities proposed under this application were not likely to have a significant effect on the SPAs or on the protected habitats of the SACs within the zone of influence of the Foreshore Licence Application Area and they were screened out.

The screening report found that significant effects for a number of mobile Qualifying Interests of a number of SACs within the zone of influence of the Shelmalere Offshore Windfarm Foreshore Licence Application Area, that may be present in the site at least some of the time, could not be ruled out and a Natura Impact Statement for those species and their designated sites has been prepared and submitted in support of this Foreshore Licence Application as "Shelmalere"

Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment".

### Describe any measures proposed to mitigate possible impacts on Natura2000 sites and other key marine receptors.

Mitigation measures are proposed for the protection of the twaite shad (*Alosa fallax fallax*), grey seal (*Halichoerus grypus*), (harbour) common seal (*Phoca vitulina*), bottlenose dolphin (*Tursiops truncatus*) and harbour porpoise (*Phocoena phocoena*) which may be present in the site at certain times of the year and the NPWS Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (NPWS, 2014) will be implemented, including the soft start procedure, to mitigate against any possible impact to these species.

In addition, should Shelmalere OWF identify that a temporal overlap is likely between this project and those identified in Section 6.4 as having the potential to cause in-combination effects to marine mammals and protected fish species, Shelmalere Offshore Wind Farm Ltd. will engage with those projects to ensure that survey activities are sufficiently distanced to ensure that adverse effects on marine mammals and protected fish species are mitigated for.

No other mitigation measures are considered necessary for any of the Natura 2000 sites (SPAs and SACs) considered within Chapters 6 and 7 of the document entitled "Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment as submitted in support of this application.

Protective measures in relation to key marine receptors (i.e. Annex IV Species) are included in the "Shelmalere Offshore Wind Farm Foreshore Licence Application: Risk Assessment for Annex IV Species" document which is also provided in support of this application (see Chapter 4 of same).

## 3.5 Describe any other projects or plans for the area, anticipated or developed, that in combination with this proposal, may have a significant effect on a Natura 2000 site:

Other plans and projects within 30 km of the Foreshore Licence Application Area were examined as part of the Natura Impact Statement. While this distance is somewhat arbitrary, it is considered conservative in the context of the scale and nature of the proposed activities under this application and sufficient in the context of an assessment of in-combination effects on SACs, SPAs or their relevant Qualifying Interests. A number of projects were identified as being relevant to an assessment of in-combination effects and they are listed below.

- Latitude 52 Offshore Wind Farm Limited Foreshore Licence Application (FS007232)
- Arklow Bank Phase 2 and Sure Partners Site Investigations at Arklow Bank (FS007331)
- Codling Wind Park (FS007045)
- Energia Site Investigation off Wexford Coast (FS007048)
- Hibernian Wind Power Kilmichael Point (FS006788)

- Arklow Waste-Water Treatment Plant (FS006862)
- Wexford County Council's Trinity Warf (FS006960)
- Rosslare Europort Masterplan
- Iarnród Eireann Rosslare Europort (FS006506)
- Iarnród Éireann Rosslare Europort (FS007222)

A screening for in-combination effects is included in Section 6.4 of the document entitled ""Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment" as submitted in support of this application.

A number of the above applications were found to result in the possibility of likely significant effects when considered in combination with the proposed activities under this application depending on circumstances and were brought forward for consideration under Appropriate Assessment Stage 2 Natura Impact Statement.

Mitigation measures to address the possibility of in-combination effects are included in the Appropriate Assessment Stage 2 Natura Impact Statement (Chapter 7 of the document entitled ""Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment" as submitted in support of this application).

#### **Part 4: Navigational Safety Considerations**

### 4.1 Distance from shipping lanes at nearest point. Illustrate on the appropriate marine charts accompanying the application.

Please see Section 3.3 Figure 3-12 of the document entitled ""Shelmalere Offshore Wind Farm Foreshore Licence Application: Supporting Information for Screening for Appropriate Assessment" and submitted in support of this application which shows marine traffic for the area in accordance with the Automatic Identification System (AIS) monitored by the Irish Coast Guard.

The general trend of AIS traffic moves along a number of north-south lines in the Irish Sea. Traffic is dispersed across a number of routes, rather than one main channel. There are no designated shipping lanes within the Foreshore Licence Application Area, however there are some commonly used routes. The Rosslare to Fishguard and Rosslare to Pembroke Passenger Ferry Routes pass to the south of the proposed Array Investigation Area.

In addition the site has been constrained to avoid the traffic separation zone near Rosslare.

### 4.2 If a safety zone for passage of shipping (including fishing and leisure boats) is sought, supply details and give reasons.

No safety zone is sought, although Notice to Mariners will request that vessels remain at least 500m radial distance from the survey vessels for safety purposes.

4.3 If any temporal /spatial restrictions are sought on the use of any type of fishing gear or leisure activity within the area, provide details and justification for such restrictions and indicate location(s) on appropriate marine charts.

No formal restrictions are sought. As for Section 4.2, a Notice to Mariners will be issued in advance of any site investigation activities with a request that vessels remain a safe distance from the survey vessels. In addition, ongoing engagement with users of the foreshore will be undertaken in advance of and throughout the duration of the site investigation activities.

#### **Declaration and Consent:**

The details provided here are correct to the best of my knowledge.

I understand that no activities will be commenced, by me or my agents on the proposed site, without the prior written consent of the Minister. The granting or refusal of any foreshore investigation licence will not give rise on the part of the applicant to any expectation whatsoever for, right or entitlement to a grant of any future foreshore permission in respect of all or any part of any area of foreshore.

By submitting this application form, I agree that the details provided (with personal contact details redacted) are to be published on the Department of Housing website and also that the full information provided including contact details are to be processed and retained by the Department of Housing, Planning and Local Government and shared with all appropriate Prescribed Bodies (as part of the Prescribed Bodies Consultation process) in furtherance of consideration for a foreshore Consent under the Foreshore Act 1933 (and Foreshore Amendment Act 2011).

I give consent to the Minister and his servants to copy this application and to make (a redacted) copy available for inspection and copying by the public. This consent relates to this application, to any further information, or submission provided by me or on my behalf and to the publication of the licence document.

Signed for and on behalf of the applicant:

Name of Signatory (block letters): Edwina White

**Position Held: Consenting and Environment Manager** 

Date: 07/10/2021

#### **Return completed applications to:**

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

Enquiries to: Foreshore@housing.gov.ie (Other contact details to be included in Guidance

materials)

Email a copy of application documents: <a href="mailto:Foreshore@housing.gov.ie">Foreshore@housing.gov.ie</a>