

Investigative Foreshore Licence Application (Offshore Renewable Energy)

Please indicate project category as appropriate: Wave:
Tidal:
Wind:
X
Other:
Please specify:
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Regulation (2016/679) requirements.
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E-mail address:

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

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

Company Information

Malin Array Limited is a special purpose vehicle established by Ivernia Energy for the purpose of developing an offshore wind farm, Malin Head Offshore Wind Farm (OWF), in the Atlantic Ocean of the coast of County Donegal.

Project Information

Malin Array Limited is proposing to develop an offshore wind farm at a site off the Northern Donegal Coast, see accompanying Malin Head Offshore Wind Farm – Foreshore Licence Maps:

- FS007395-01_Malin Head Foreshore Licence Map
- FS007395-02_Malin Head Foreshore Licence Map SI

The proposed site will be developed using fixed offshore wind turbine technologies. The proposed site has suitable bathymetry, ground conditions and is relatively close to shore.

As well as generating electricity from offshore wind energy, this project will also consider options to produce hydrogen from offshore wind energy by the process of electrolysis. This is what is known as a power-to-x solution. Greater details on these proposals will be provided as the project progresses through development phases. Offshore wind is one of the key technologies to bring forward the production of green hydrogen and meet Ireland and Europe's commitment of reaching net-zero carbon emissions by 2050.

Malin Array Limited is seeking to undertake a variety of marine surveys at the proposed site in order to form the specific location, design and layout of the proposed offshore wind farm and export cable route to shore. The surveys will include geophysical, geotechnical, environmental, metocean campaigns and are detailed in this foreshore licence application form and supporting documents.

Specifically, the objective of the proposed foreshore licence application works is to determine detailed site conditions including seafloor geology, metocean conditions and environmental characteristics. The survey results will also provide information to inform the planning and design of a wind farm, including wind, waves, seabed characteristics and marine life.

The site investigation surveys in the proposed Foreshore Licence Application Area will support the development of the proposed Malin Head Offshore Wind Farm. The delivery of the Malin Head Offshore Wind Farm is in line with the Irish Government's Programme for Government, Climate Action Plan, draft of the National Marine Planning Framework and Offshore Renewable Energy Development Plan (OREDP). In particular the proposal is consistent with the OREDP's vision, policies, and principles especially in relation to sustainable development, mitigation of climate change and delivery of Ireland's climate renewable electricity targets.

Subject to the award of a Foreshore Licence, and favourable weather conditions, Malin Array Limited propose a survey works schedule that will be phased over 5 years and ideally commencing in early 2023 (or as soon as a Foreshore Licence is obtained).

Site Selection Process

A constraint mapping and screening exercise was undertaken within the Irish Exclusive Economic Zone (EEZ) to identify an area suitable for offshore wind farm development. As part of the site selection process all areas of the Irish EEZ were assessed for suitable offshore wind development areas. This involved a review of the following data groupings; maritime boundaries, bathymetry, resource potential, access to grid, offshore developments, environmental, physical and social constraints.

This work concluded that it would be suitable to develop an offshore wind farm off Ireland's North coast at the identified site. Therefore, the proposed survey area was selected off the Northern coast of Donegal. The identified site area has suitable resource, bathymetry, is less constrained than other areas and initial indications point towards appropriate ground conditions being present.

The total proposed survey area is 835.25 km² (83,525 ha). All marine surveys will be confined to the Foreshore Licence Application Area within the foreshore 12 nautical mile (nm) limit. The full description of planned surveys is contained within the Schedule of Works accompanying this application.

Proposals for future works at the site

Malin Array Limited will endeavour to develop an offshore wind project. The company is drawn to Ireland because of the suitable conditions for developing an offshore wind farm and is eager to contribute to the government's ambitions to achieve 2030 renewable energy targets.

If the proposed survey work, together with desktop studies and stakeholder engagement, indicates the feasibility of bringing the proposed project to the next step, that step will be progressed in accordance with the National Marine Planning Framework, the relevant consenting regime and the Maritime Area Planning Act 2021.

The accompanying Foreshore Licence Application Maps shows the proposed survey area inside the 12nm limit which is the subject of this Foreshore Licence Application

1.2 Possible MW output of final development:

A minimum of 1,000MW.

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

The following types of surveys will carried out:

- Geophysical surveys (including archaeology and benthic) and associated benthic sampling programme
- Benthic Survey Programme on the basis of geophysical data
- Preliminary geotechnical surveys
- Wind resource monitoring
- Metocean surveys
- Nearshore and intertidal surveys
- Environmental surveys including bird and marine mammal surveys

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

The table below summarises the survey methods to be undertaken at the proposed investigation area. For further details please see submission document; *Malin Head Offshore Wind Farm Foreshore Licence Application – Schedule of Works.*

Survey	Methods	Purpose	Sampling Effort
	Multibeam	MBES is a system for collecting detailed	MBES may be
	Echosounder	topographical data of the seabed. Typical	undertaken across
	(MBES)	equipment includes the Kongsberg EM3002D	the Foreshore Licence
		multi-beam system with mounting system	Application Area to a
		including AML SV Smart Probe, Kongsberg EM	suitable percentage
		2040 or similar. For these surveys the	coverage.
		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 surveys are used to determine sediment	SSS may be
	(SSS)	characteristics and seabed features. The	undertaken across
		EdgeTech 4200 may be taken as an indicate	the Foreshore Licence
		example of an SSS device and for these	Application Area to a
		surveys will have a potential operating	suitable percentage
		frequency range of approximately	coverage.
		230/540kHz in the offshore area and	
		540/850kHz in the shallower nearshore area	
		with sound pressure levels of 228dB re1μPa	
		@1m.	
	Magnetometer	A magnetometer is used to identify magnetic	It may be undertaken
I to adversario de la cal		anomalies and hazard mapping for metal	across the Foreshore
Hydrographical		obstructions, shipwrecks and unexploded	Licence Application
and Geophysical		ordnance on the surface and in the shallow	Area to a suitable
		sub-surface. The Geometrics G-882 can be	percentage coverage.
		taken as an indicative equipment example, it is a passive device (i.e. it does not emit any	
		sound waves into the marine environment).	
	Sub-bottom	SBP is used to develop an image of the	SBP may be
	Profiling (SBP)	subsurface, identifying different strata	undertaken across
	1 101111116 (32)	encountered in the shallow sediments. The	the Foreshore Licence
		Innomar SES-2000 Medium is an indicative	Application Area to a
		example of a parametric system with a	suitable percentage
		primary and secondary frequency range of	coverage.
		85-115kHz and 2-22kHz, respectively, and	
		sound pressure levels of up to 247 dB	
		(typically operated at <200dB) re1μPa @ 1m,	
		which would be used in both nearshore and	
		offshore areas. The Applied Acoustics AA301	
		is an indicative example of a boomer, with	
		sound pressure levels in the range of 208-	
		215dB re1μPa @ 1m which would be used in	
		the nearshore shallower area. The applied	
		Acoustics Duraspark 400 is an indicative	
		example of a sparker system used in sub-	
		bottom profiling, with sound pressures in the	
		range of 204-216dB re1μPa @1m.	
		Boreholes may be up to 80m deep within the	Up to 60 no.
		OWF area; however, within the OECC area	boreholes will be
Geotechnical	Boreholes	they will likely be around 20m deep. All	required within the

		drilling equipment used will follow the ISO and API technical specifications for drilling equipment.	Foreshore Licence Application Area.
	Cone Penetration Tests (CPT)	CPTs are a method for testing in situ soil parameters. CPTs can be performed as either Seabed CPTs or downhole in boreholes.	Up to 105 no. CPTs will be required covering both the preliminary and interim campaign within the Foreshore Licence Application Area.
			The spacing interval will be determined by the variability and level of understanding of the shallow geology.
	Vibrocore / Gravity Corer	Vibrocore and Gravity Corer are methods of collecting un-consolidated seabed samples.	Up to 150 no. sample locations will be required for either vibrocore or gravity sampling with a target depth of 6m BSF within the Foreshore Licence Application Area.
	Floating LiDAR	Up to 2 floating LiDAR buoys will be deployed to measure the wind resource within the OWF Area. Deployment of this buoy will include anchor points on the seafloor. LiDAR may be deployed for a period of between 12 to 24 months.	Up to 2 floating LiDAR buoys may be deployed
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.	Up to 5 ADCPs may be used to examine wave and current conditions in the Foreshore Licence Application Area.
	Wave Buoy	Up to 3 wave rider buoys may be deployed to measure wave heights and direction to feed into the detailed design of the project within the OWF area. They will be moored to the seabed by a suitably sized mooring structure	Up to 3 Waverider buoys may be deployed to measure wave heights and direction to feed into the detailed design of the project within the array investigation area.

	Bird Survey	Identify bird species distribution and behaviour within the Foreshore Licence Application Area. This does not require a licence under the Foreshore Act 1933, as amended and is included for information only.	Bird survey may be undertaken across the Foreshore Licenc Application Area
	Fisheries Survey	Identify fish species distribution within the Foreshore Licence Application Area. Exact details of monitoring required will be determined through engagement with the relevant authorities such as SFPA, the Marine Institute and through local knowledge where appropriate.	Fisheries survey may be undertaken acros the Foreshore Licent Application Area
Ecology	Benthic Ecology (subtidal benthic survey, intertidal habitat walkover survey)	This survey is designed to identify the expected benthic communities and habitats at the site. This may consist of the intertidal Phase I walkover survey of the OECC Area and landfalls of the cable with identification of the main habitats present (in the form of biotope mapping). In the intertidal area features of conservation importance will be identified by means of intertidal habitat mapping with core/quadrat sampling and hard substrate quadrat sampling where appropriate. Subtidal sample locations may be subject to drop down video in advance of sampling.	There will be up to 150 no. subtidal sampling locations within the Foreshore Licence Application Area and multiple samples will be take at each location.
	Marine Mammal Acoustic Monitoring (CPODs)	Marine mammal acoustic monitoring using CPODs deployed on the seabed. SoundTrap hydrophones may be deployed alongside the CPODs for periods throughout the monitoring campaign.	Either 4 permanent sites will be selected or the 4 sites will be relocated every 3 months during battery change. The CPOD locations are subject to archaeological surveresults.
Archaeological	Underwater Archaeology	Identification and assessment of metallic and other targets recorded during the marine geophysical surveys.	Underwater Archaeology survey may be undertaken across the Foreshore Licence Application Area

Describe the nature and scale of any structure to be erected on the foreshore for testing the suitability of the site. Is the structure proposed to be temporary or permanent?

There will be no structures erected for the geophysical survey campaign. This application is for survey activities only. No permanent structure shall be erected as part of these works. As described in the Schedule of Works document, a Floating LiDAR Buoy (Seawatch or similar) will be deployed accompanied by a mooring system, ADCPs

	will be deployed on the seafloor as part of the survey works and CPODs may be deployed for marine mammal monitoring. Some of these instruments be deployed accompanied by marker buoys.
	All activities represent only temporary deployments associated with data collection and site characterisation investigations.
1.6	Provide information on proposed mooring, marking and lighting arrangements for any proposed deployment of instrument arrays.
	All equipment deployed under the licence shall be moored, marked and lit as required under navigational safety requirements and in consultation with the Commissioners for Irish Lights.
1.7	Has the applicant held or does the applicant hold any previous Foreshore Licences, Leases or applications over the area sought or over any other area? (Give details including Department's file reference number(s)).
	No previous foreshore leases or licences have been or are held by the applicant.
1.8	Indicative timing of the investigation works: (i) Start date (ii) Duration (iii) Any other information relevant to timing.
	Malin Array Limited intends to adopt a phased survey approach in order to minimise the risk associated with poor weather conditions. The intention is to begin geophysical survey activities in 2023 with a staged series of investigations over the subsequent five years as the project reaches the detailed design stage.
	Geophysical surveys will inform the geotechnical and benthic campaign. The Geotechnical campaign will be carried out on a phased basis and will likely have an initial, interim and completion phase as the detailed project design progresses.
	It will be necessary for an additional site investigation licence application post enactment of the Marine Planning and Development Management Bill to allow for surveys outside of the current 12nm limit, the extent of the marine area currently regulated under the Foreshore Act.
	Ecology (benthic, bird and marine mammal) surveys are also proposed for 2021 and will be multi-year (2-3 years) depending on weather and seasonality of survey parameters. It is planned to undertake aerial surveys which will not interact with the marine environment.
1.9	Describe any likely interactions with activities of the public or other foreshore users during the investigative works (e.g. fishing, aquaculture, sailing, and surfing). Describe any measures proposed to minimise inconvenience to other users.
	No negative impact or minimal impact is expected from the planned survey work with most other foreshore users (fishing, sailing, surfing, etc). Malin Array Limited will issue a marine notice to notify the public and other foreshore users in the Foreshore Licence Application Area about the works schedule.
1.10	Describe any consultations undertaken to date with other foreshore users.

At the time of submission of the application to Foreshore Unit consultation had yet to be initiated with other foreshore users in relation to the scope of works proposed under the Foreshore Licence application. Malin Array Limited intends to begin a programme of stakeholder engagement over the coming weeks, initially with fisheries organisations and local fisheries before expanding the consultation to other relevant parties. Malin Array Limited intends to ensure that all relevant bodies and the public are kept fully informed prior to and during the proposed survey works.

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

An online pre-application meeting was held with officers of the Foreshore Unit of the Department of Housing, Local Government and Heritage (DHLGH) on 25th September 2020 and again on the 4th of November 2021.

The application has been submitted in line with the guidelines issued by the Foreshore Unit of DHGLH.

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:

The stakeholder engagement process has begun with several meetings having taken place already, these include:

- National Parks and Wildlife Service (NPWS) 10.05.2021
- Commissioners of Irish Lights 21.05.2021
- Donegal County Council 26.04.2022
- EirGrid 16.06.2021
- Irish Coast Guard 23.06.2021
- Irish Whale and Dolphin Group 25.05-2021
- Marine Survey Office 08.07.2021
- Irish Whale and Dolphin Group 07.12.2021
- Shannon Foynes Port Company 02.12.2021

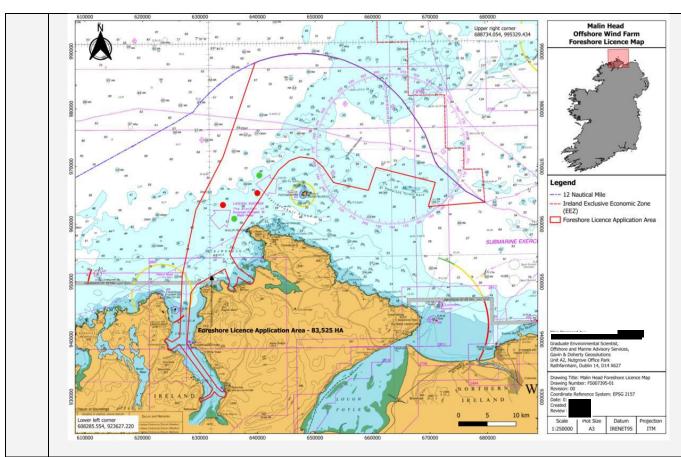
1.13 Describe briefly any support received or under application with the Sustainable Energy Authority of Ireland (SEAI) or other State Agency:

No support for this project is under application with or has been received from the Sustainable Energy Authority of Ireland or other state bodies.

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

2.1 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 the below Foreshore Licence Map.



2.2 Geographic coordinates of the area under application, where the area can also be identified on the Ordnance Survey map, specify Ordnance Survey coordinates also.

Point No.	WGS84 / UTM zone 29N EPSG:32629		WGS84 Geographic EPSG:4326		IRENET95 / Irish Transverse Mercator EPSG:2157	
	Х	Υ	Longitude	Latitude	х	Υ
0	597075.82	6108946.18	-7.47792	55.11769	633305.78	930158.67
1	596458.94	6109467.33	-7.48742	55.12250	632696.36	930688.66
2	596235.57	6109718.05	-7.49083	55.12479	632476.57	930942.59
3	595831.56	6108965.00	-7.49742	55.11810	632061.77	930195.30
4	595033.06	6108453.51	-7.51011	55.11366	631255.93	929695.24
5	594291.03	6108068.32	-7.52186	55.11034	630508.37	929320.67
6	594082.51	6107963.30	-7.52516	55.10944	630298.34	929218.63
7	593978.90	6107915.84	-7.52680	55.10903	630194.05	929172.65
8	593861.86	6107854.53	-7.52866	55.10851	630076.13	929113.01
9	593770.78	6108011.23	-7.53003	55.10993	629987.29	929271.03
10	593697.14	6108301.23	-7.53109	55.11255	629917.80	929562.09
11	593743.00	6108586.68	-7.53028	55.11511	629967.75	929846.89
12	593898.58	6108501.09	-7.52787	55.11431	630122.11	929759.06

1	L3	594068.13	6108466.09	-7.52522	55.11396	630291.16	929721.64
_ 1	L 4	594864.11	6108838.36	-7.51262	55.11715	631092.49	930082.52
1	15	595417.02	6109187.04	-7.50384	55.12018	631650.40	930423.29
_1	16	595987.81	6110114.61	-7.49458	55.12840	632234.48	931342.70
1	L 7	591723.57	6115605.93	-7.55966	55.17854	628048.83	936895.22
_1	18	590077.44	6117778.82	-7.58481	55.19836	626433.80	939091.76
1	19	588680.59	6116869.79	-7.60703	55.19045	625023.88	938202.73
2	20	588621.75	6116700.02	-7.60801	55.18893	624962.60	938033.80
2	21	588529.54	6116707.68	-7.60945	55.18902	624870.51	938042.78
2	22	588417.84	6116760.40	-7.61119	55.18951	624759.56	938097.10
2	23	588190.96	6116821.97	-7.61473	55.19011	624533.55	938161.92
2	24	588098.19	6116875.14	-7.61617	55.19060	624441.54	938216.42
2	25	588027.99	6116945.12	-7.61726	55.19124	624372.34	938287.41
2	26	588002.66	6116975.06	-7.61764	55.19151	624347.44	938317.72
2	27	588012.53	6117021.62	-7.61747	55.19193	624357.98	938364.13
2	28	588092.13	6117098.32	-7.61620	55.19261	624438.68	938439.70
2	29	588078.06	6117175.80	-7.61640	55.19330	624425.72	938517.38
3	80	588017.41	6117271.65	-7.61732	55.19418	624366.44	938614.11
3	31	588123.01	6117524.93	-7.61558	55.19643	624475.67	938865.87
3	32	587818.94	6118175.46	-7.62016	55.20233	624180.92	939520.78
3	33	587581.61	6118163.03	-7.62389	55.20226	623943.41	939511.75
3	34	587477.82	6118283.66	-7.62548	55.20336	623841.34	939633.88
(C)	35	587439.49	6118338.43	-7.62607	55.20386	623803.80	939689.20
3	86	587453.09	6118388.34	-7.62584	55.20431	623818.11	939738.91
3	37	587489.32	6118415.45	-7.62526	55.20455	623854.74	939765.51
3	88	587511.46	6118442.85	-7.62490	55.20479	623877.27	939792.59
3	39	587554.34	6118482.43	-7.62422	55.20514	623920.72	939831.56
4	10	587572.09	6118527.68	-7.62392	55.20554	623939.11	939876.55
4	11	587580.08	6118585.25	-7.62378	55.20606	623947.93	939934.01
4	12	587589.91	6118644.40	-7.62361	55.20658	623958.60	939993.02
4	13	587605.13	6118664.23	-7.62336	55.20676	623974.12	940012.64
4	14	587633.92	6118664.27	-7.62291	55.20676	624002.91	940012.27
4	15	587659.76	6118660.76	-7.62251	55.20672	624028.69	940008.38
4	16	587693.60	6118683.89	-7.62197	55.20692	624062.87	940031.02
4	17	587700.76	6118680.79	-7.62186	55.20689	624069.98	940027.82
4	18	587746.91	6118693.16	-7.62113	55.20699	624116.31	940039.54
4	19	587766.52	6118719.31	-7.62081	55.20723	624136.29	940065.41
5	50	587776.85	6118712.96	-7.62065	55.20717	624146.54	940058.90
5	51	587803.69	6118722.55	-7.62023	55.20725	624173.52	940068.11
5	52	587808.60	6118740.30	-7.62014	55.20741	624178.68	940085.79

53	587804.84	6118777.93	-7.62019	55.20775	624175.46	940123.48
54	587844.36	6118804.38	-7.61956	55.20798	624215.36	940149.35
55	587864.50	6118840.46	-7.61923	55.20830	624236.01	940185.15
56	587867.80	6118857.36	-7.61918	55.20845	624239.56	940202.00
57	587884.33	6118856.64	-7.61892	55.20844	624256.08	940201.05
58	587888.57	6118836.94	-7.61886	55.20826	624260.03	940181.29
59	587882.94	6118813.13	-7.61895	55.20805	624254.06	940157.55
60	587938.83	6118711.45	-7.61811	55.20713	624308.50	940055.08
61	588002.94	6118629.33	-7.61712	55.20638	624371.44	939972.03
62	588813.39	6118201.73	-7.60453	55.20239	625175.78	939532.80
63	590118.78	6119111.94	-7.58373	55.21033	626494.25	940424.32
64	590376.82	6129784.60	-7.57625	55.30616	626905.39	951093.56
65	592597.22	6141222.80	-7.53751	55.40849	629290.11	962500.15
66	597159.53	6150399.55	-7.46227	55.49004	633984.45	971611.46
67	602498.30	6166859.24	-7.37171	55.63679	639560.26	987994.47
68	642834.02	6143257.98	-6.74358	55.41471	679555.32	963813.28
69	641274.62	6143134.66	-6.76826	55.41406	677994.23	963712.38
70	632986.11	6142372.61	-6.89946	55.40953	669695.16	963069.49
71	634140.55	6146583.21	-6.87921	55.44703	670910.08	967263.33
72	623807.49	6149027.55	-7.04138	55.47170	660612.52	969856.18
73	622530.79	6145021.87	-7.06333	55.43605	659278.27	965868.96
74	616424.65	6146298.57	-7.15925	55.44900	653190.59	967233.42
75	614496.82	6149056.65	-7.18857	55.47423	651302.45	970019.19
76	612870.47	6150421.17	-7.21374	55.48686	649695.75	971407.09
77	610516.40	6150656.14	-7.25088	55.48951	647345.07	971675.92
78	608769.17	6149993.32	-7.27878	55.48395	645588.32	971038.24
79	606887.64	6148323.88	-7.30918	55.46937	643682.78	969395.86
80	599963.49	6137339.41	-7.42260	55.37217	636600.72	958510.85
81	598642.20	6133523.44	-7.44478	55.33816	635224.61	954713.81
82	600162.80	6131164.94	-7.42166	55.31666	636711.36	952333.46
83	602299.21	6129689.26	-7.38855	55.30297	638826.62	950827.10
84	602902.87	6129213.54	-7.37922	55.29857	639423.45	950342.71
85	602841.72	6129006.73	-7.38026	55.29673	639359.33	950136.78
86	602720.45	6128728.10	-7.38227	55.29425	639234.06	949859.89
87	602578.97	6128572.18	-7.38455	55.29288	639090.34	949706.00
88	602421.61	6128487.01	-7.38706	55.29214	638931.76	949623.08
89	602239.71	6128401.83	-7.38995	55.29142	638748.63	949540.51
90	602086.68	6128406.16	-7.39236	55.29149	638595.66	949547.04
91	602017.38	6128446.58	-7.39344	55.29187	638526.94	949588.46
92	601987.06	6128550.53	-7.39388	55.29281	638498.12	949692.84

9	3	601880.23	6128621.27	-7.39553	55.29346	638392.30	949765.11
9	14	600350.05	6129499.03	-7.41931	55.30166	636874.70	950664.84
9	5	600082.36	6129652.58	-7.42347	55.30310	636609.22	950822.23
9	6	599938.67	6128611.50	-7.42610	55.29377	636450.58	949783.20
9	7	599655.55	6128125.35	-7.43073	55.28946	636160.48	949301.12
9	8	599641.72	6128074.65	-7.43097	55.28901	636145.92	949250.61
9	9	599618.67	6128042.38	-7.43134	55.28873	636122.41	949218.68
10	00	599572.58	6128010.12	-7.43208	55.28844	636075.86	949187.07
10	01	599544.92	6127968.63	-7.43253	55.28808	636047.60	949145.98
10	02	599540.31	6127964.02	-7.43260	55.28804	636042.93	949141.44
10	03	599517.26	6127973.24	-7.43296	55.28812	636020.01	949150.99
10	04	599392.81	6127876.45	-7.43495	55.28728	635894.17	949055.98
10	05	599378.98	6127844.18	-7.43518	55.28699	635879.88	949023.91
10	06	599392.81	6127811.91	-7.43498	55.28670	635893.24	948991.44
10	07	599415.86	6127784.26	-7.43462	55.28645	635915.89	948963.45
10	80	599420.47	6127761.21	-7.43456	55.28624	635920.17	948940.34
10	09	599429.69	6127728.94	-7.43443	55.28595	635928.93	948907.94
13	10	599443.51	6127687.46	-7.43422	55.28557	635942.16	948866.26
1:	11	599438.90	6127655.19	-7.43431	55.28528	635937.09	948834.06
13	12	599485.00	6127678.24	-7.43357	55.28548	635983.51	948856.44
1:	13	599508.05	6127715.11	-7.43320	55.28581	636007.09	948892.99
1:	14	599535.70	6127696.68	-7.43277	55.28564	636034.48	948874.15
13	15	599581.80	6127576.83	-7.43209	55.28455	636078.86	948753.65
13	16	599614.06	6127498.47	-7.43161	55.28384	636110.00	948674.82
13	17	599627.89	6127438.55	-7.43141	55.28330	636122.97	948614.70
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13	19	599604.84	6127350.97	-7.43180	55.28252	636098.66	948527.45
12	20	599485.00	6127295.66	-7.43371	55.28204	635978.02	948473.86
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12	22	599213.04	6127171.20	-7.43803	55.28098	635704.28	948353.30
12	23	599079.37	6127143.54	-7.44015	55.28076	635570.21	948327.56
12	24	598904.21	6127148.15	-7.44290	55.28084	635395.11	948334.69
12	25	598765.93	6127203.47	-7.44506	55.28136	635257.62	948391.98
12	26	598540.06	6127327.92	-7.44857	55.28252	635033.54	948519.68
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12	28	598323.42	6127544.57	-7.45190	55.28451	634820.00	948739.44
12	29	598281.94	6127655.19	-7.45252	55.28552	634780.10	948850.66
13	30	598254.28	6127756.60	-7.45292	55.28643	634753.90	948952.47
13	31	598272.72	6127839.57	-7.45260	55.28717	634773.53	949035.17
13	32	598309.59	6127890.27	-7.45200	55.28762	634811.13	949085.35

133	598337.25	6127936.37	-7.45155	55.28803	634839.45	949131.05
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135	598420.22	6128139.18	-7.45017	55.28984	634925.33	949332.67
136	598633.94	6128875.93	-7.44655	55.29641	635149.63	950066.36
137	598490.01	6129236.40	-7.44869	55.29968	635010.88	950428.90
138	597776.51	6131023.33	-7.45930	55.31587	634323.02	952226.10
139	592952.91	6128224.70	-7.53620	55.29167	629459.16	949496.65
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150	598067.14	6108702.93	-7.46247	55.11531	634293.63	929901.21
	134 135 136 137 138 139 140 141 142 143 144 145 146 147 148	134 598406.39 135 598420.22 136 598633.94 137 598490.01 138 597776.51 139 592952.91 140 591930.15 141 591368.08 142 592499.44 143 596653.38 144 597461.59 145 598179.66 147 598372.67 148 598299.33 149 598205.88	134 598406.39 6127927.15 135 598420.22 6128139.18 136 598633.94 6128875.93 137 598490.01 6129236.40 138 597776.51 6131023.33 139 592952.91 6128224.70 140 591930.15 6126811.13 141 591368.08 6117934.50 142 592499.44 6116163.69 143 596653.38 6110529.83 144 597461.59 6109741.93 145 597785.65 6109678.90 146 598179.66 6109737.37 147 598372.67 6109489.93 148 598299.33 6109134.16 149 598205.88 6108923.37	134 598406.39 6127927.15 -7.45046 135 598420.22 6128139.18 -7.45017 136 598633.94 6128875.93 -7.44655 137 598490.01 6129236.40 -7.44869 138 597776.51 6131023.33 -7.45930 139 592952.91 6128224.70 -7.53620 140 591930.15 6126811.13 -7.55277 141 591368.08 6117934.50 -7.56449 142 592499.44 6116163.69 -7.54730 143 596653.38 6110529.83 -7.48401 144 597461.59 6109741.93 -7.47160 145 597785.65 6109678.90 -7.46655 146 598179.66 6109737.37 -7.46035 147 598372.67 6109489.93 -7.45741 148 598299.33 6109134.16 -7.45868 149 598205.88 6108923.37 -7.46022	134 598406.39 6127927.15 -7.45046 55.28793 135 598420.22 6128139.18 -7.45017 55.28984 136 598633.94 6128875.93 -7.44655 55.29641 137 598490.01 6129236.40 -7.44869 55.29968 138 597776.51 6131023.33 -7.45930 55.31587 139 592952.91 6128224.70 -7.53620 55.29167 140 591930.15 6126811.13 -7.55277 55.27916 141 591368.08 6117934.50 -7.56449 55.19952 142 592499.44 6116163.69 -7.54730 55.18341 143 596653.38 6110529.83 -7.48401 55.13200 144 597461.59 6109741.93 -7.47160 55.12477 145 5987785.65 6109678.90 -7.46655 55.12414 146 598179.66 6109737.37 -7.45035 55.12458 147 598372.67 6109489.93 -7.45741 55.12232<	134 598406.39 6127927.15 -7.45046 55.28793 634908.46 135 598420.22 6128139.18 -7.45017 55.28984 634925.33 136 598633.94 6128875.93 -7.44655 55.29641 635149.63 137 598490.01 6129236.40 -7.44869 55.29968 635010.88 138 597776.51 6131023.33 -7.45930 55.31587 634323.02 139 592952.91 6128224.70 -7.53620 55.29167 629459.16 140 591930.15 6126811.13 -7.55277 55.27916 628416.09 141 591368.08 6117934.50 -7.56449 55.19952 627726.71 142 592499.44 6116163.69 -7.54730 55.18341 628832.71 143 596653.38 6110529.83 -7.48401 55.13200 632906.01 144 597461.59 6109741.93 -7.47160 55.12477 633702.95 145 598179.66 6109737.37 -7.46655 55.1241

2.3 Delineate proposed site on relevant Admiralty Chart.

Please see the Foreshore Licence Maps accompanying this application:

- FS007395-01_Malin Head Foreshore Licence Map
- FS007395-02_Malin Head Foreshore Licence Map SI

2.4 Relevant Local Authority:

Donegal County Council.

2.5 Location name and nearest townland name:

The Foreshore Licence Application Area is at least 10km from shore. The following coastal townlands are each over 10km south of the proposed investigation area (listed below West – East).

Republic of Ireland

- Rathmullan
- Clonbeg
- Buncrana
- Tullagh
- Ballyliffin
- West Town
- Ballyhillion
- Portronan
- Middltown
- Slievebawn

- Ballygorman
- Portaleen
- Bunagee
- Tremone
- Glenagivney
- Shrove

2.6 Distance from nearest other developments, including any offshore renewable energy developments on the foreshore:

The proposed site is situated in proximity to several small and medium sized ports. The locations of which are given below:

Port	Туре	Distance to closest point (km)
Greencastle	Ferry/Fishing	24.78
Magilligan	Ferry	25.46
Moville	Fishing	30.59
Ballycastle	Ferry	38.38
Downings	Fishing	27.54
Rathmullan	Commercial/Fishing	1.87
Derry City	Commercial	50.51

2.7 Distance from shore:

The proposed site boundary runs along the highwater mark as shown in the Foreshore Licence Maps accompanying this application.

2.8 Distance from nearest aquaculture operation:

The nearest aquaculture operation is located 0.52 km away from the OECC at Lough Swilly.

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

The closest Designated Shellfish Growing Waters are located within Lough Swilly, which overlaps with the Offshore Export Cable Corridor of the proposed survey area at Kinnegar beach on the west and Buncrana beach export route on the east side of Lough Swilly. There are additional export cable locations overlapping also at Portsalon and Ballymastocker beach. There is an overlap of 4.1 km² between the Harmful Algal Blooms (HABs) Inshore Shellfish Production Area and the OECC within Lough Swilly. There is an overlap of 24 km² between the OECC and the SWD Shellfish Waters Area, also within Lough Swilly.

The table below shows the species for which nursery and spawning areas are known to occur within the application area.

Species	Nursery Area	Spawning Area
Cod	✓	X
Haddock	х	X
Mackerel	✓	X
Horse Mackerel	✓	X
Hake	x	X
Megrim	✓	✓

2.10 Any other site details considered relevant:

As part of the preparation for this application an examination was undertaken of various sources to identify both infrastructure and historical wrecks in the survey area. Further information is available in the Non-Statutory Environmental Report (NSER) submitted with this application.

Shipwreck data available through both the National Monuments Service (NMS) Database and the INFOMAR project is shown in Figure 4-13.

There are five INFOMAR surveyed shipwrecks within the bounds of the proposed site. The NMS Database identifies fifty shipwrecks within the proposed survey site, five of which overlap with those surveyed by the INFOMAR programme. However, many of the wrecks from the NMS Database are unconfirmed, unlike the INFOMAR database NMS have not been subject to recent surveying.

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):

There are 6 Special Protection Areas (Inishtrahull SPA, Malin Head SPA, Trawbreaga SPA, Lough Swilly SPA, Horn Head to Fanad Head SPA, Greers Isle SPA) and 7 Special Areas of Conservation (Hempton's Turbot Bank SAC, Inishtrahull SAC, North Inishowen Coast SAC, Ballyhoorisky Point to Fanad Head SAC, Tranarossan and Melmore Lough SAC, Mulroy Bay SAC and Lough Swilly SAC) in and around the Foreshore Licence Application Area.

The Foreshore Licence Application Area Offshore Export Cable Corridor overlaps with Lough Swilly SAC and North Inishowen Coast SAC Natura 2000 sites.

The nearest SPA to the Foreshore Licence Application Area is the Lough Swilly SPA which overlaps with the Offshore Export Cable Corridor of the Foreshore Licence Application Area.

The nearest SAC to the Foreshore Licence Application Area is Hempton's Turbot Bank SAC which shares its northern boundary with the Foreshore Licence Application Area's southern boundary.

Details on the potential impact on protected sites are detailed in the Supporting Information for Screening of Appropriate Assessment (SISAA) and Natura Impact Statement (NIS) documents submitted with this application.

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

The Table below summarises Natura 2000 Sites with designated Qualifying Interests in or around the project area.

	Distance to Foreshore
Site Name	Licence Site
(Site Code)	Investigation Area
	(Km)
Hempton's Turbot Bank SAC (002999)	0.00
Inishtrahull SAC (000154)	4.01

Inishtrahull SPA (004100)	4.25
North Inishowen Coast SAC (002012)	0.00
Malin Head SPA (004146)	3.60
Trawbreaga Bay SPA (004034)	14.61
Skerries and Causeway (UK0030383)	17.26
Mulroy Bay SAC (002159)	12.43
Lough Swilly SAC (002287)	0.00
Horn Head And Rinclevan SAC (000147)	25.17
Horn Head to Fanad Head SPA (004194)	0.52
Greers Isle SPA (004082)	6.00
Tory Island SPA (004073)	40.00
Cloghernagore Bog And Glenveagh National Park SAC (002047)	36.68
South-East Islay Skerries (UK0030067)	46.84
Leannan River SAC (002176)	11.95
Tranarossan and Melmore Lough SAC (00194)	14.18
Gweedore Bay And Islands SAC (001141)	65.60
Inner Hebrides and the Minches (UK0030393)	70.87
The Maidens (UK0030384)	80.66
West Of Ardara/Maas Road SAC (000197)	100.47
Rutland Island And Sound SAC (002283)	77.77
Slieve Tooey/Tormore Island/Loughros Beg Bay SAC (000190)	104.47
Skerries and Causeway SAC (UK0030383)	17.26

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

Information in support of a Screening for Appropriate Assessment is provided in support of this application (refer Supporting Information for Screening Appropriate Assessment [SISAA] document that forms part of the Application Documentation). That report found that in absence of mitigation measures, significant effects on several mobile marine species that are qualifying interests of Special Areas of Conservation within the zone of influence of the site investigation activities could not be excluded at the screening stage and a Natura Impact Statement (NIS) is provided in support of a Stage 2 Appropriate Assessment to be undertaken by the Competent Authority. The NIS concluded that with the implementation of appropriate mitigation measures the proposed works will not have a significant impact on any Natura 2000 sites or its qualifying interests either alone or in combination with other plans or projects. For further information please see the accompanying "Supporting Information for Screening of Appropriate Assessment (SISAA)" report and "Natura Impact Statement (NIS)".

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

Compliance with DAHG (2014) (Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters) best practise guideline will ensure that the proposed surveys will have no significant impact on marine

mammals or fish species sensitive to noise. In addition to the face that survey vessels will be slow moving and therefore any risk due to collision is unlikely.

Specific mitigation measures are included for the protection of species susceptible to the sudden introduction of underwater noise. The soft start procedure will be used for all surveys to mitigate against any possible impact to the species.

No other mitigation measures are considered necessary for any of the Natura 2000 sites considered under the Appropriate Assessment Screening Report (Please see SISAA and NIS documents).

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:

Plans from other projects were examined. Potential in-combination effects were not identified from any other projects.

Having examined the possible likely in-combination effects of this project it is concluded that due to the:

- Likely timing and phased nature of proposed activities;
- Temporary nature of proposed activities;
- Very localised and imperceptible effects of proposed activities; and
- Implementation of the DAHG (2014) best practice guidelines.

adverse in-combination effects of the proposed activities as having possible incombination effects on the conservation objectives of the Natura 2000 sites assessed in this report is considered not likely.

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 the Non-Statutory Environmental Report which shows marine traffic for the area in accordance with the Automatic Identification System (AIS) monitored by the Irish Coast Guard. Vessel traffic does pass through the OWF area, however the higher density is located in the OECC area of the Foreshore Licence Application Area.
4.2	If a safety zone for passage of shipping (including fishing and leisure boats) is sought, supply details and give reasons. No specific safety zone will be sought. A notice will be issued to mariners in advance of works which will ask that other users of the foreshore maintain a safe distance from survey vessels in line with accepted maritime safety.
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 specific restrictions will be sought. As in Section 4.2 a notice to mariners will be issued in advance of any survey works.

Declaration and Consent:

The details provided in this application and supporting documentation are correct to the best of my knowledge.

I understand that no works shall 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 consent in respect of all or any part of the area of Foreshore to which any consent in relation to this application is granted.

By submitting this application form, I agree that the details provided (with personal contact details in the case of an application from an individual redacted) are to be published on the website of 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, as amended.

I give consent to the Minister and his servants to copy this application and to make (a redacted where appropriate) 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):		
Position Held: Director		
Date: 08/07/2022		

Return completed applications to:

Marine Planning and Development 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: Foreshore@housing.gov.ie