

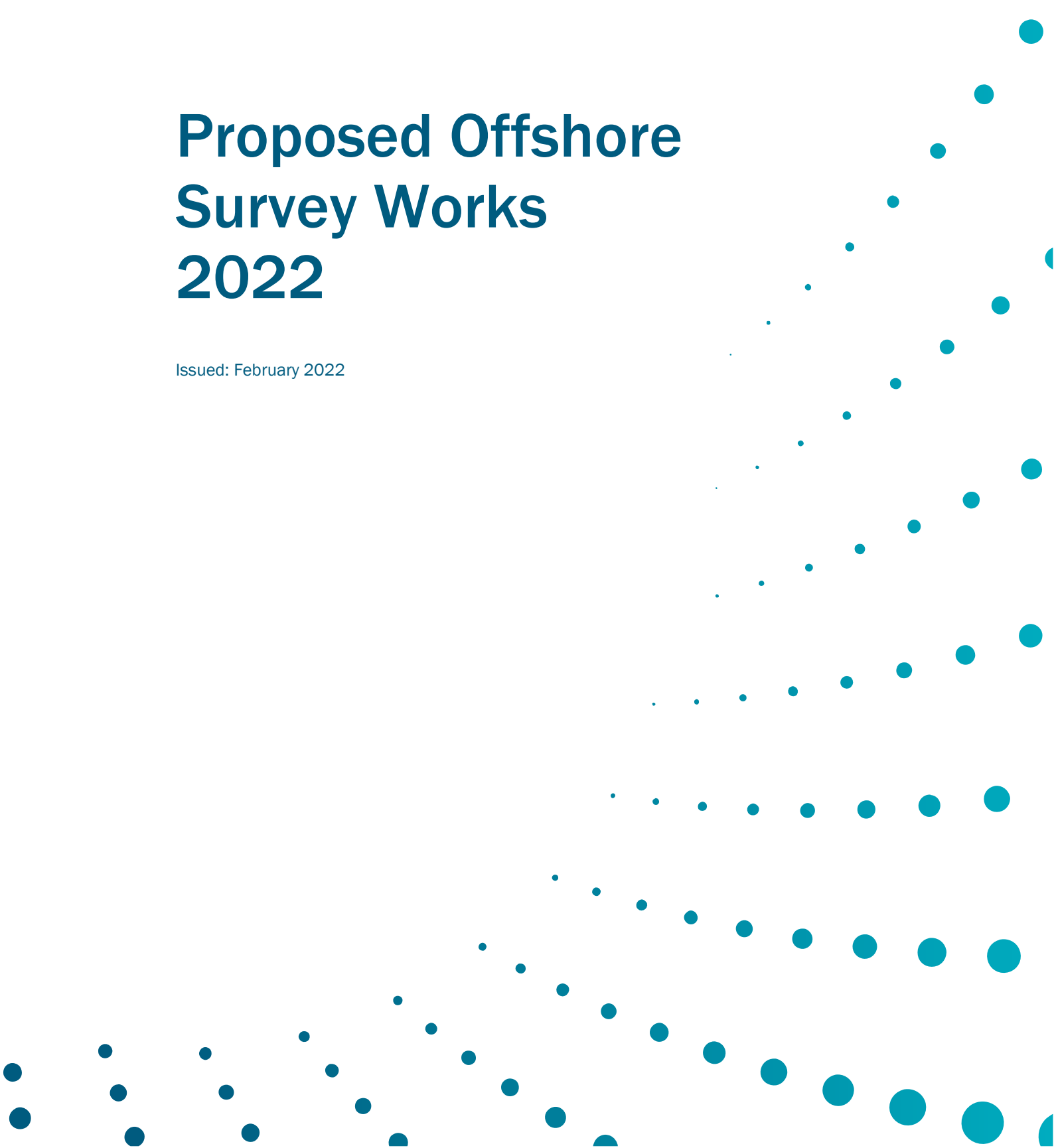


CLOGHERHEAD
Offshore Wind Farm



Proposed Offshore Survey Works 2022

Issued: February 2022





INTRODUCTION

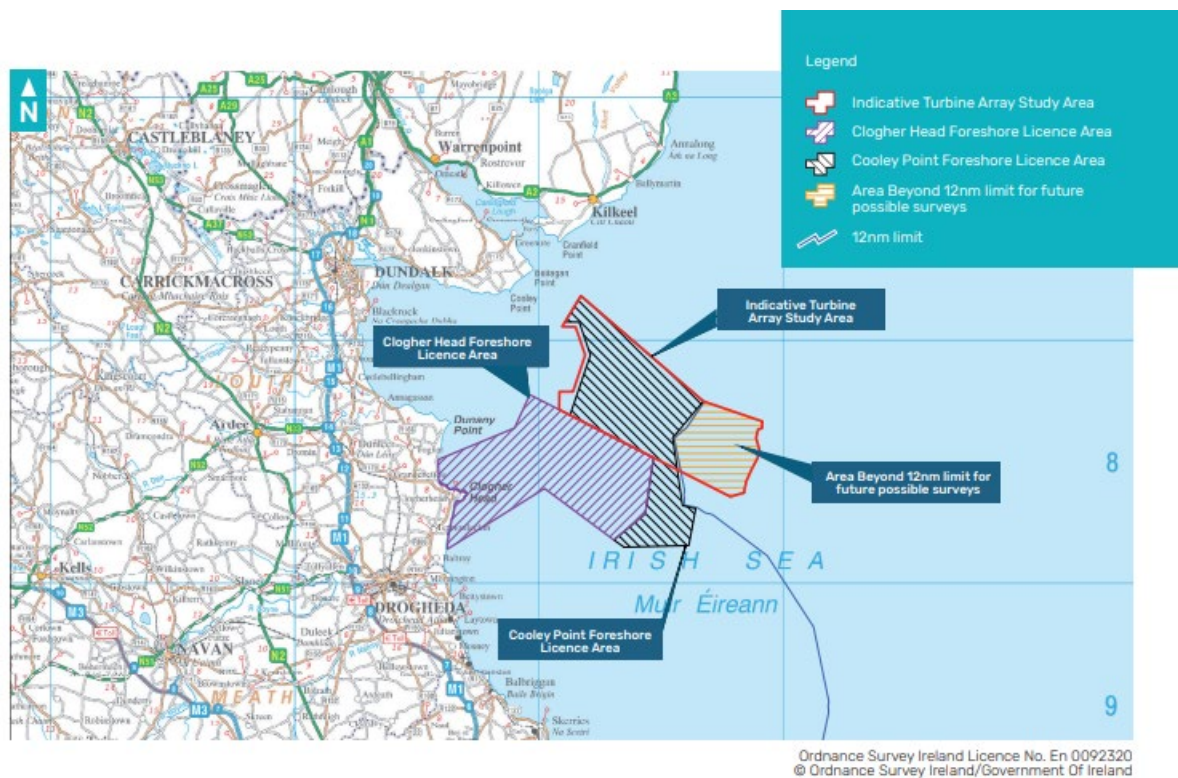
ESB has been granted two Foreshore Licences, one for Clogherhead in 2018 and a second for Cooley Point in 2019, off the coast of County Louth as shown on the below mapping. It is proposed that both the areas will be merged into a single preferred potential development area to be called Clogherhead Offshore Wind Farm. Full details of the project and the foreshore licences are available on the project website www.ClogherheadWind.ie

A series of geophysical and geotechnical surveys will be undertaken to allow us to measure water depth, to identify seabed features (e.g., sand waves, reefs, archaeological features), to determine seabed sediment type and distribution (sand, mud, gravel, rock) both on and below the seabed. We will also be carrying out ecological surveys to determine the ecology on and in the seabed and in the water column. Oceanographic and hydrographic data on wind speed, current speed and direction and wave height will also be recorded.

During 2022 the project intends undertaking the following offshore geophysical and metocean survey activities:

- a vessel based geophysical survey;
- deployment of a buoy mounted floating LiDAR wind measurement device; and,
- deployment of up to 3 seabed mounted met ocean measurement devices which again will be marked by buoys.

Further details of the proposed surveys methods and devices are available in the following pages.





TIMELINE AND STATUS

ESB are in the process of tendering for contractors to undertake the proposed survey works and deployment of the required devices with the intention of commencing the works in early summer 2022.

All works will be undertaken in accordance with best practice and the requirements and obligations of the Foreshore Licenses. The geophysical survey is expected to take up to 3 months to complete while the deployment of FLiDAR and Seabed Metocean monitor is expected to last for up to 12 months.

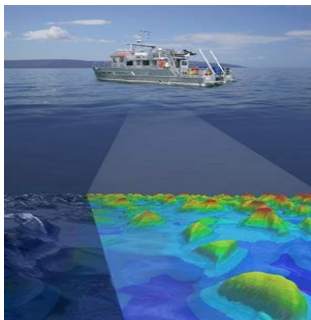
The Project team will continually engage with potentially impacted maritime area users and the fishing community as we get more clarity on proposed timelines. A Marine Notice(s) will be published in due course with more refined details of the proposed works, locations, and timing.

GEOPHYSICAL SURVEY PROPOSED

The geophysical survey proposed this year will be a non-intrusive (no drilling) campaign. Geophysical surveys allow for the accurate prediction of the type of material present on the seabed (rocks, pebbles, sand/mud). Geophysical surveys involve using acoustic devices to emit sound energy into the water column. This sound energy creates sound waves which travel through the water column. When these sound waves encounter an object or the seabed they are reflected, and the returning echoes are then detected on board the vessel. This is called sonar. Different echo strengths and return speeds indicate different seabed features and different physical characteristics.

[The survey will NOT involve the use of air guns as a seismic source as these are more common in Oil & Gas exploration projects where deep penetration rates are required.](#)

Multibeam Echosounder (MBES)



A multibeam echosounder (MBES) system will be used to provide detailed bathymetric mapping throughout the survey area.

The R2Sonic 2024 may be taken as an indicative example of a MBES system to be used in the completion of these works. The equipment will operate within a frequency range of 400-700kHz (400,000-700,000Hz) with sound pressure levels in the range of 200-228dB re1 μ Pa at 1 metre range.

Side Scan Sonar

A Side Scan Sonar (SSS) is a remote sensing acoustic device attached to the vessel hull or as part of a towed array.

The purpose of the equipment will be to produce seabed imagery within the proposed application area. The EdgeTech 4200 is an example of SSS that may be used during the proposed survey works.



The SSS will be dual frequency hydrographic sonar with the lowest operating frequency of 300 to 900 kHz but not less than 100 kHz.



Magnetometry Surveys



A Magnetometer is a passive remote sensing device that detects magnetic fields from ferrous objects such as lost anchors, sunken ships, and buried pipes on/in the seabed. It is towed behind or alongside the survey vessel.

Sub Bottom Profiler/Reflection Seismic

A Sub Bottom Profiler &/or reflection seismic method of geophysical investigation provides information on the rock and sediment layers beneath the seabed. It is towed behind the vessel. Low frequency penetrates further into seabed (10 – 500m).



FLOATING LIDAR

LiDAR (Light Detection and Ranging) is an optical remote sensing technique that measures both vertical and horizontal wind speeds and direction based on laser signals backscattered by particles in the atmosphere. Floating lidar units take offshore wind measurements from a vertical profiling lidar, integrated onto a standalone floating structure, such as a buoy. The lidar unit collects a range of measurements, including the critical wind data needed for design.



For Clogherhead it is proposed that a single FLiDAR device will be deployed.

METOCEAN MONITORING

Metocean monitoring is proposed to be undertaken using up to 3 seabed frames with Acoustic Doppler Current Profiler (ADCP) sensors mounted on it, an anchoring system, and a surface marker buoy.



FURTHER INFORMATION

We understand that people may have questions in relation to the proposed survey work or the project in general at this early stage of the process. If there are any queries you believe we can help you with, please feel free to contact our Project Director or our Fisheries Liaison Officer at the email addresses provided and we will get back to you as soon as possible and are available to meet at your convenience.

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