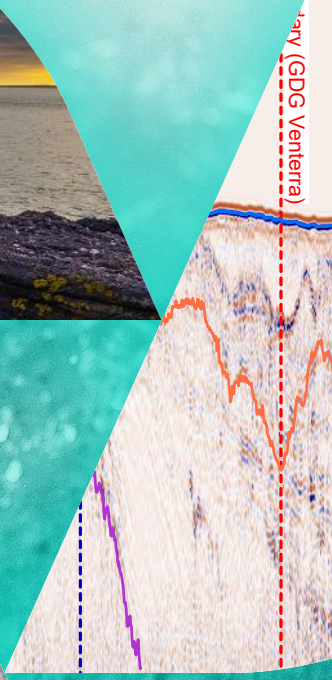

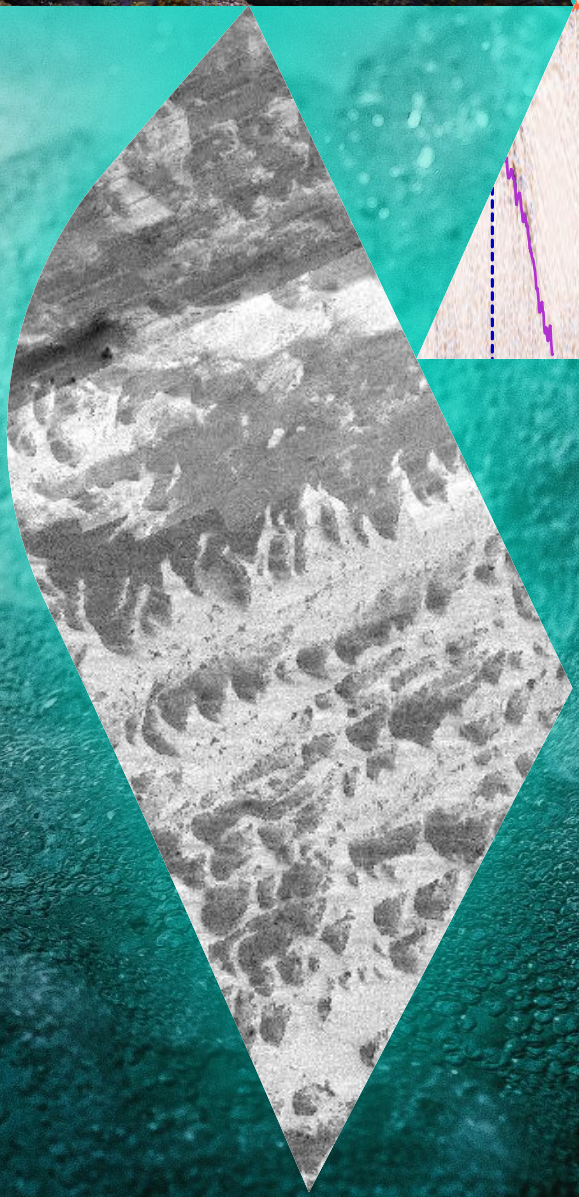

Lí Ban

Desktop Study

Summary Report

GDG
GAVIN & DOHERTY
GEOSOLUTIONS

Powered by
venterra

This site is anticipated to support up to

1.5 GW

of offshore wind energy

Initial Insights for Lí Ban

Lí Ban is one of four survey areas designated by the Department of Climate, Energy and the Environment (DCEE) within the South Coast DMAP region, located off the coast of County Waterford. The site is expected to support between 1.1 GW and 1.5 GW of offshore wind energy, with an auction scheduled by DCEE for 2026/2027.

Gavin and Doherty Geosolutions, a Venterra Group company, was commissioned by several developers in the region to provide desktop studies and ground modelling services for the Tonn Nua site, located north-northwest of Lí Ban. Where data availability allowed, the assessment and interpretation carried out or Tonn Nua were extended into Lí Ban to get an initial understanding of the ground conditions within this second maritime area. A Desktop Study (DTS) has now been completed and is available for prospective developers, the Table of Contents (TOC) is included within this summary document.

A Data-Driven Approach to Site Understanding

The preliminary assessment of Lí Ban made use of publicly available datasets (e.g. INFOMAR, BGS) along with a subset of the governmental geophysical data released by DCEE for Tonn Nua which also intersected Lí Ban. As the sedimentary cover is expected to be similar between Tonn Nua and Lí Ban, the geotechnical data released by DCEE for the former site were also used to summarise the expected geotechnical parameters of the interpreted units in the latter. Seismic data interpretation focused on mapping the bedrock horizon for Lí Ban. Hazards and geohazards have also been identified and discussed.

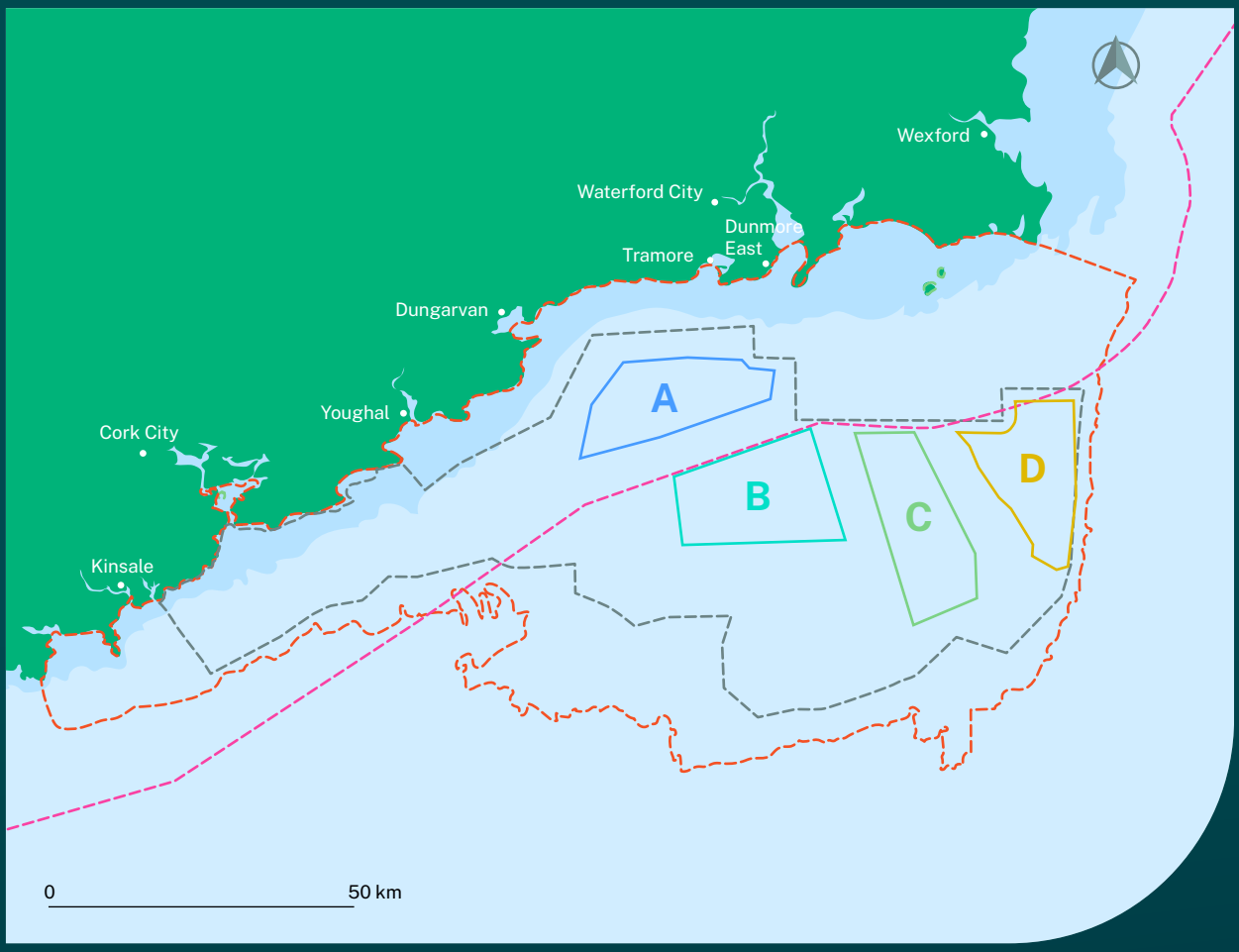

Figure 1 SC-DMAP maritime areas

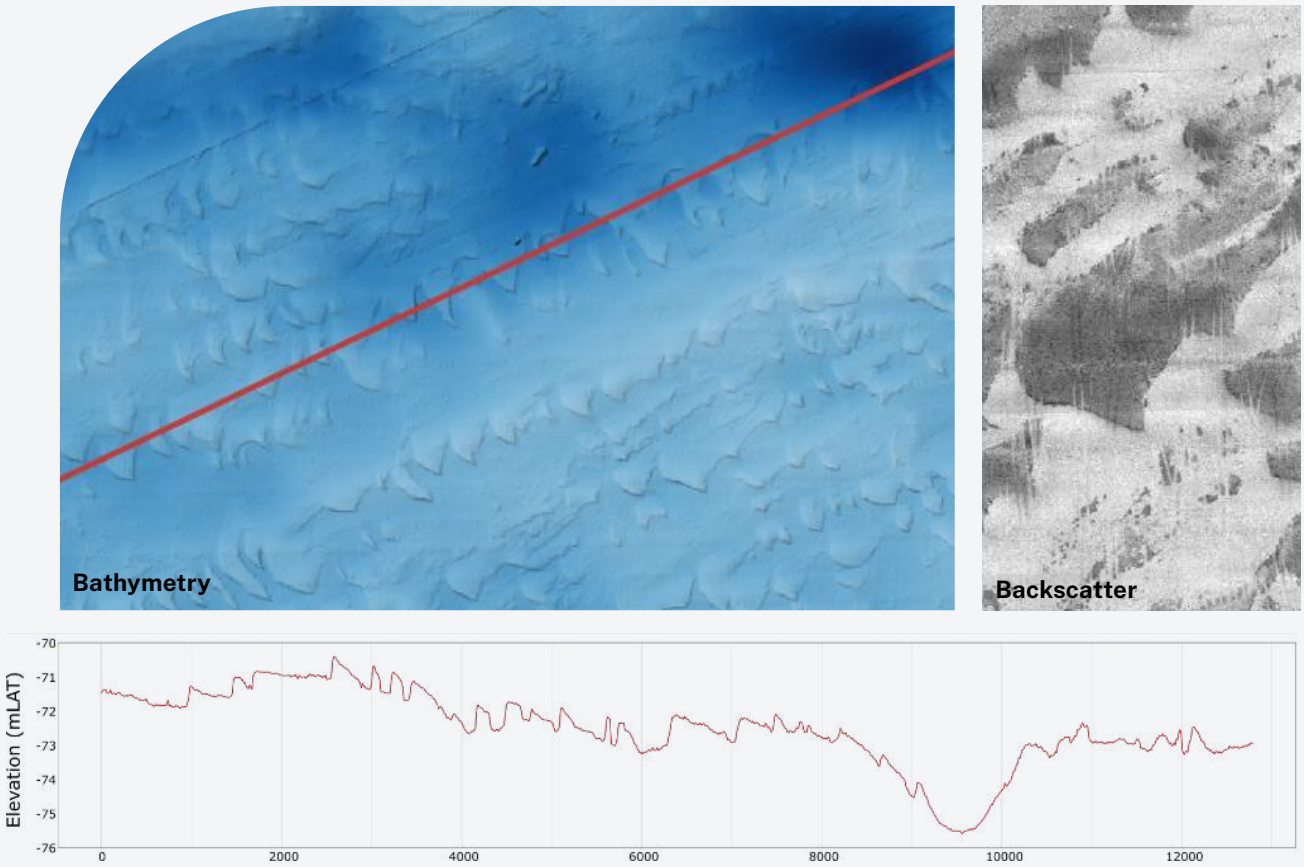

Figure 2 Example of seabed features: sand waves and channels on bathymetry (map view: left - top; profile: left - bottom) and seabed scars on backscatter (right)

Seabed and Subsurface Conditions

Based on our literature review, the seabed at the site is covered by a mix of coarse sediments and sand and displays relatively little variability. Sediment waves, shallow channels, and anthropogenic scarring (most likely associated with fishing activities) were the main features noted across the site ***(Figure 2)***.

In the subsurface, three units were separated representing the bedrock and the undifferentiated Quaternary sedimentary cover. The bedrock within the site was separated into two units based on variations in seismic facies. Ages and lithologies were inferred based on available literature and maps. Palaeogene limestone/siliciclastic deposits, similar to the ones reported in the southern part of Tonn Nua, were interpreted in the western and northern parts of Lí Ban. Southwards and south-eastwards, Cretaceous limestone/chalk is expected based on published maps. The bedrock shallows towards the south where it is potentially covered only by a thin layer of sediments ***(Figure 3)***.

The Quaternary cover was not differentiated into sub-units. As seen within Tonn Nua and as suggested by the varied seismic facies within Lí Ban, the Quaternary section is heterogeneous and expected to consist of till, lacustrine to outwash plain deposits, fluvio-glacial sediments, and Holocene sands/gravel.

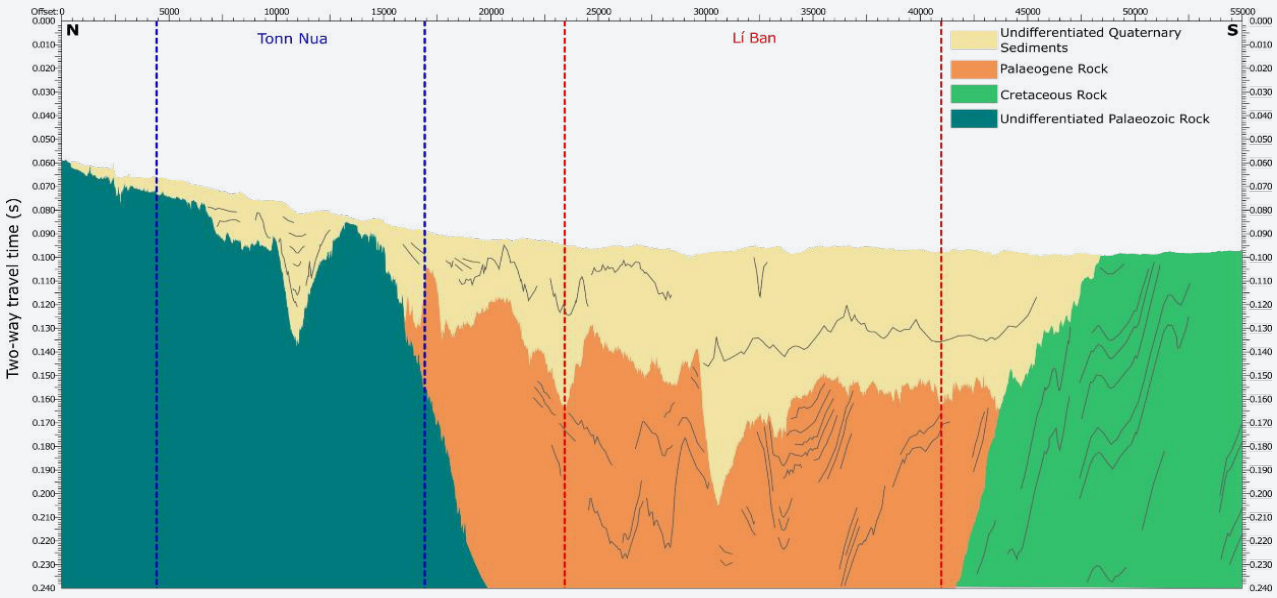

Figure 3 Schematic section through Tonn Nua and Lí Ban sites

Geohazards and Risk Considerations

The geohazards identified within the site include elements such as shallow bedrock, boulders, coarse sediments, over-consolidated deposits, and buried channels. Man-made obstructions such as shipwrecks, marine traffic, fishing grounds, and more were also collated and discussed. The risks that all of these can pose to foundations and cable-related operations have been assessed and mitigation measures or recommendations for further studies and surveys were proposed.

Future Works and Developer Value

The preliminary assessment carried out by GDG/Venterra for Lí Ban represents a solid base for future desk studies and ground modelling works within the site which will contribute towards de-risking the offshore wind project auction process. The coverage and interpretation accuracy of site-specific geophysical data to be acquired within Lí Ban will be bolstered by our familiarity with publicly available data in the Celtic Sea while our knowledge and experience in the area will ensure a successful ground model delivery.

Supporting Celtic Sea Development

Having previously delivered pre-auction ground models for several developers at the Tonn Nua site, our focus is now on Lí Ban alongside ongoing work supporting the forthcoming Manannán and Danu site auctions.

Through our access to additional academic data for the region, deep knowledge of local ground conditions and extensive experience in survey design and management, we are strongly positioned to support future geophysical and geotechnical campaigns, provide data reviews, and undertake updated integrated ground models for the site.

Working in collaboration across the whole Venterra Group, we offer expertise in coastal and marine processes, unexploded ordnance (UXO), and risk management. Our work in ground modelling naturally bridges to the engineering design services offered by our Design team, providing a fully integrated service offering across the lifecycle of offshore wind projects.

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Access the Full Lí Ban Desktop Study

Gain detailed geotechnical insights, geohazard assessments and integrated ground modelling outputs to support early-stage site evaluation and bid strategy.

To request the full report, email:

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