



ESB WELCOMES YOU TO



STOURA
OFFSHORE WIND



Photo: TetraSpar Demonstrator ApS

WHO IS ESB?

ESB
Ownership

96.9% Irish State

3.1% ESB employees

ESB, founded in 1927, is Ireland's leading energy company and has been operating in the UK since 1993. ESB has a significant portfolio of renewable energy projects in development across Scotland comprised of 2GW of onshore wind and over 2GW of offshore wind.

Our Values

WE'RE
COURAGEOUS

WE'RE
CARING

WE'RE
DRIVEN

WE'RE
TRUSTED

ESB is a value driven organisation and we believe in acting with integrity and transparency, protecting the world around us and creating an inclusive and flexible culture that protects and empowers people.

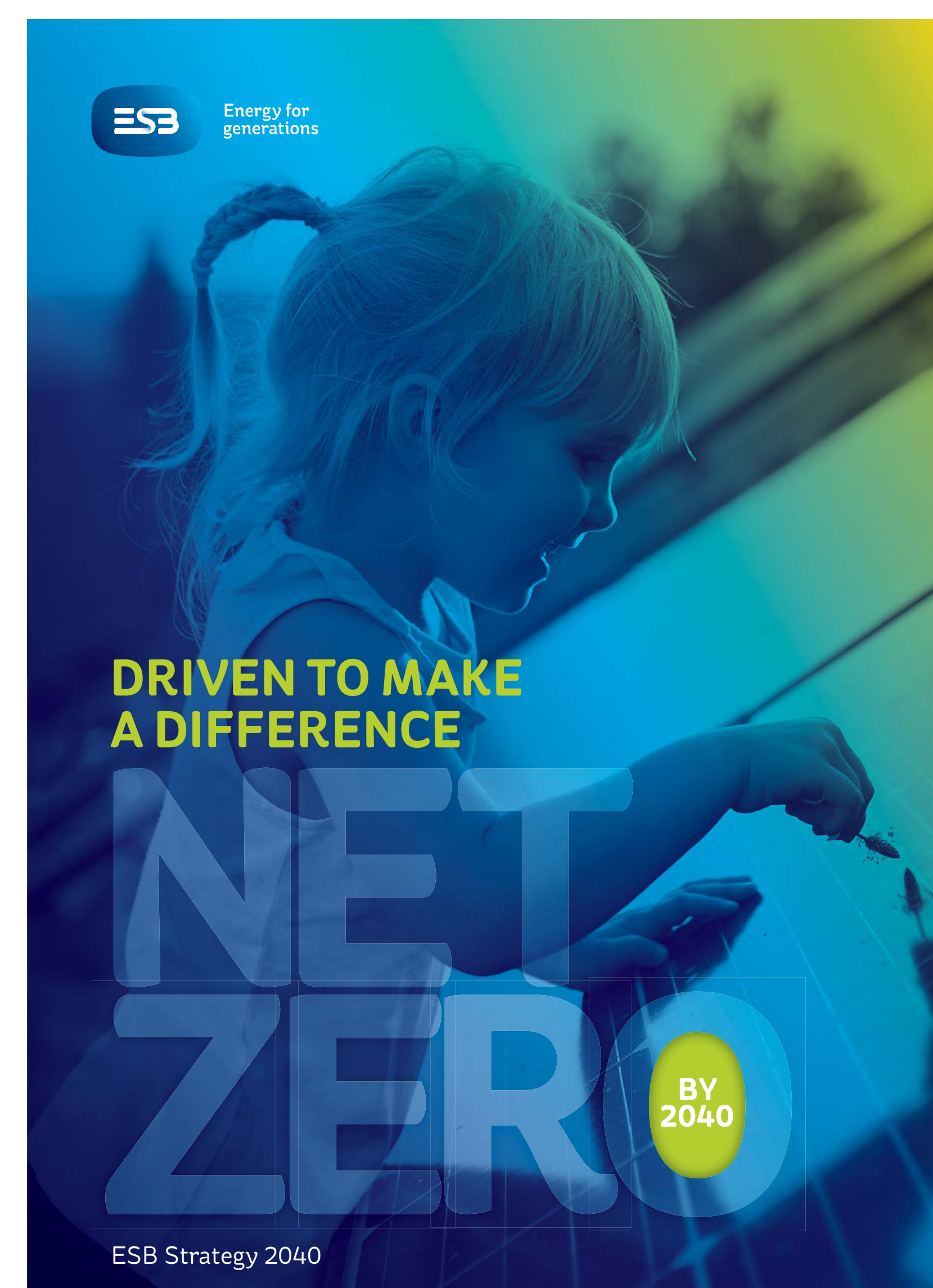
ESB is applying these values and successfully collaborating with international partners to develop large scale offshore wind projects in both Ireland and the UK. Our projects include Galloper Wind Farm (353MW), Neart na Gaoithe (450MW) and Inch Cape (1,080MW). We are also in early stage development of Havbredey (1500MW), Spiorad na Mara (900MW) and Malin Sea Wind (100MW), all located in Scottish waters.

ESB STRATEGY

In 2022 we launched our ambitious strategy – ***Driven to make a Difference: Net Zero by 2040.***

This strategy has the central aim of putting in place the infrastructure and services to enable our customers and broader society to live more sustainably.

Delivery of this strategy will require a significant increase in ESB's renewable generation portfolio across the UK and Ireland.



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STOURA
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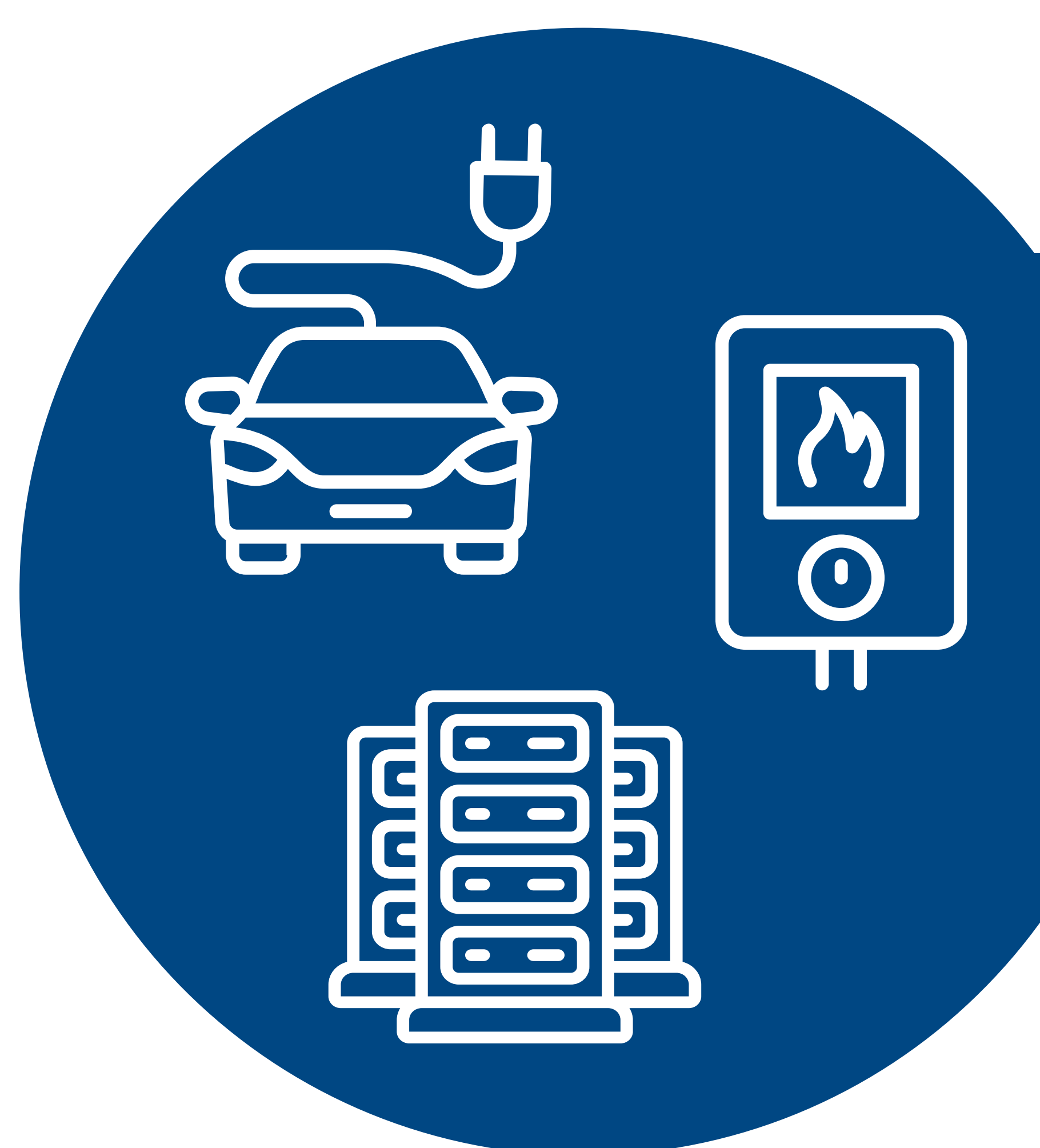
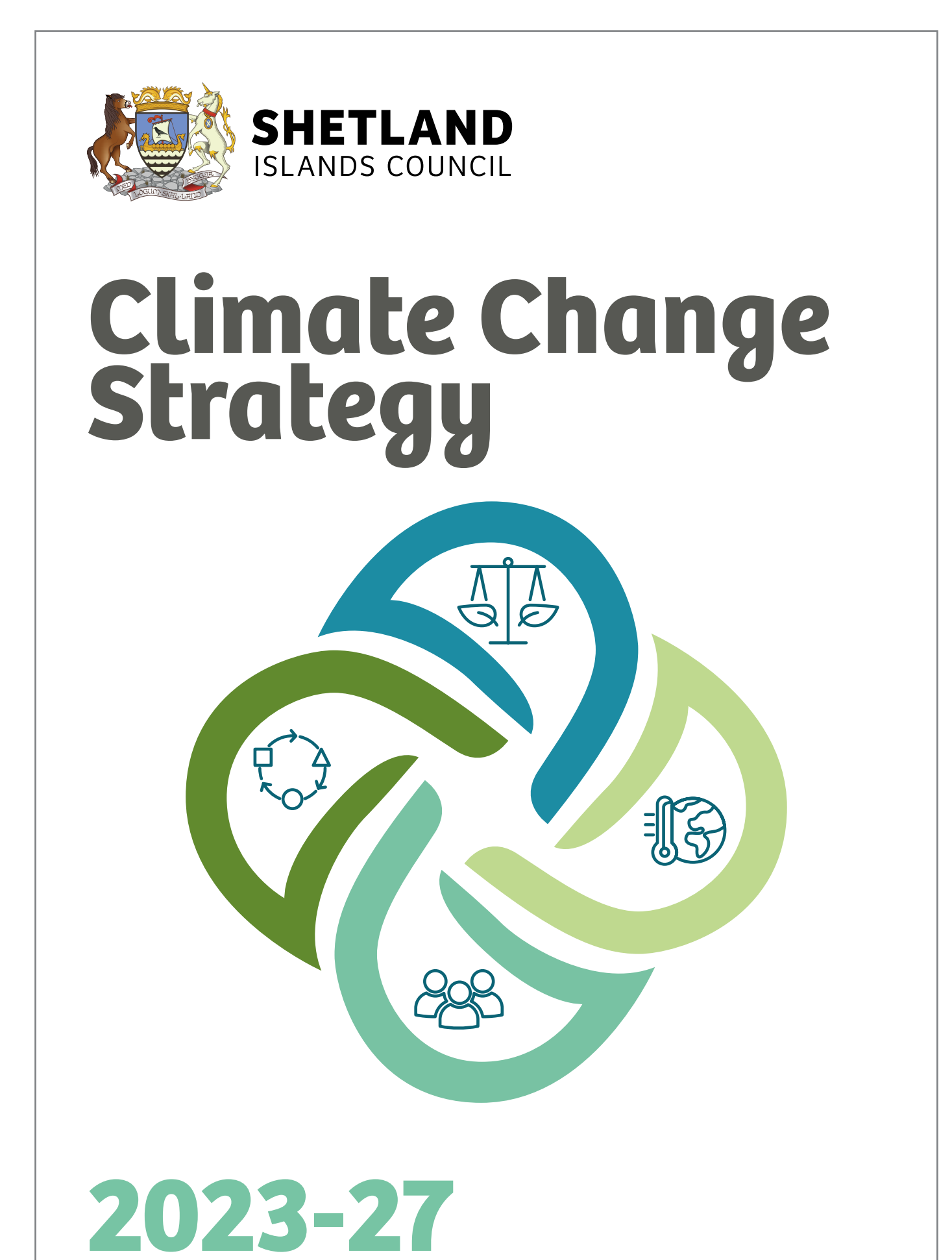
WHY DEVELOP OFFSHORE WIND?

Offshore Wind generated energy will play a major role globally in mankind's fight against climate change and our transition to a low/zero carbon economy by replacing energy generated by burning carbon intense fossil fuels with clean renewable electricity.

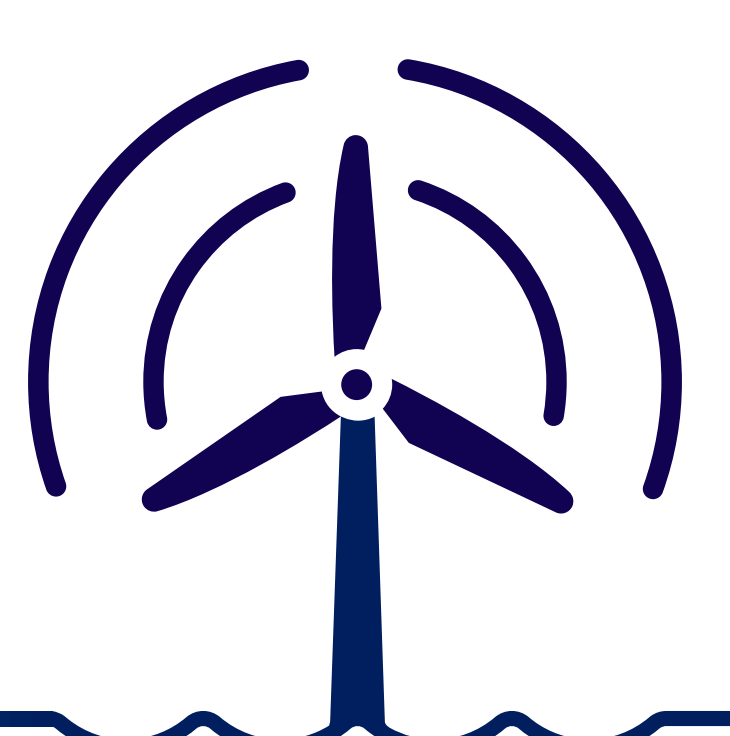
The Scottish Government has set a range of targets and ambitions to cut greenhouse gas emissions and to generate more energy from renewable sources. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 commits the Scottish Government to reach net zero emissions of all greenhouse gases by 2045. Additionally, the Scottish Government has set a target to generate 50% of Scotland's overall energy consumption from renewable sources by 2030.

ESB's values and Net Zero strategy are mirrored by the values and strategy set out in the Shetland Island Council (SIC) Climate Change Strategy and the Net Zero Roadmaps. ESB will strive to ensure alignment with these values throughout the development and construction of Stoura Offshore Wind Farm as we seek to ensure local social, economic and environmental benefits.

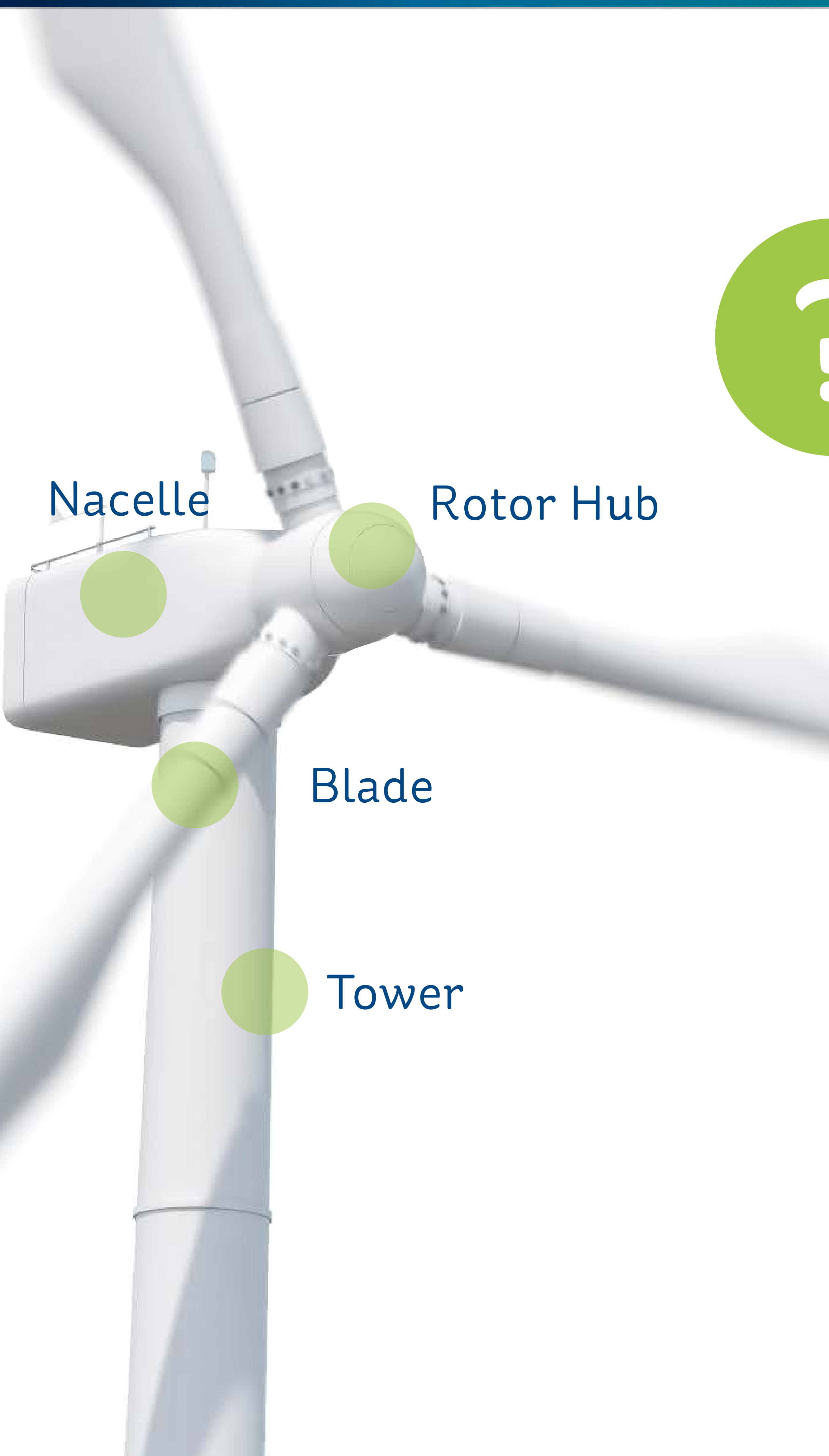
ESB will work in collaboration with SIC to interpret and apply the Energy Developer Principles in the context of floating offshore wind with a particular focus on enabling a just transition.



In addition to the significant increase in renewable electricity targets, it is forecast that electricity demand is set to rise in the coming years, with the connection of new large energy users (such as data centres) and the transition to electricity for transport (electric vehicles) and heating of buildings (electric heat pumps) being the key drivers.



WHAT IS STOURA OFFSHORE WIND?



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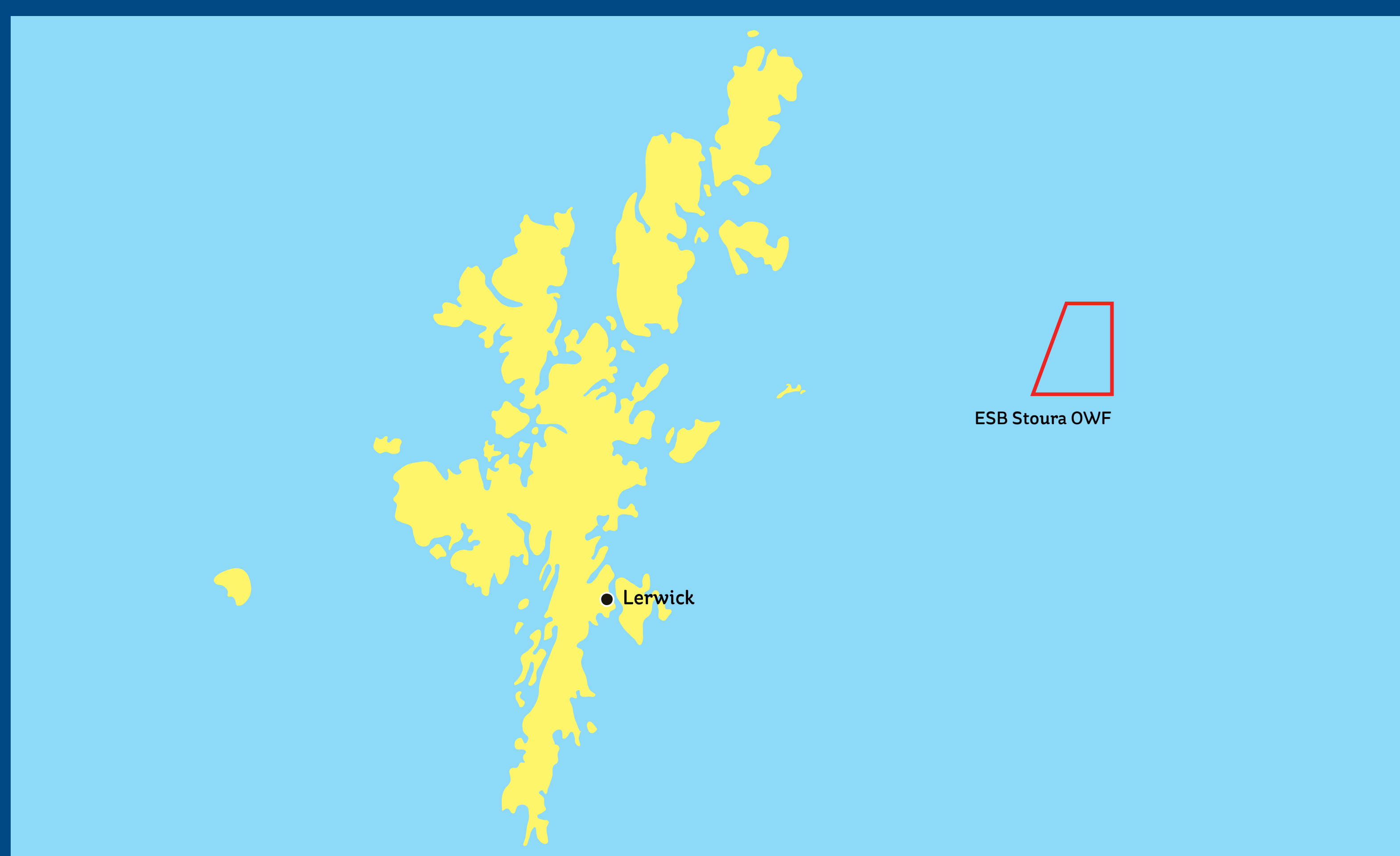
An offshore wind farm is the equivalent of an onshore wind farm albeit much larger in scale and located at sea. The wind turbine generators that make up the wind farm each consist of three **blades** mounted to a rotor hub which connects to a gearbox and a generator housed within a **nacelle**. The nacelle is located on top of a vertical **tower** which connects to a floating foundation. When the wind blows strongly enough to make the wind turbine blades rotate, the energy from the wind turns the generator and creates electricity.

Stoura Offshore Wind is ESB's proposed 500 megawatt (MW) floating offshore wind project located off the East coast of Shetland, in an area of seabed identified in the Scottish Government's Sectoral Marine Plan for Offshore Wind.

In late 2023, ESB held a naming competition among all Shetland primary school children. Entries were judged by four Shetland residents. The winning name Stoura is, in the words of the competition winner,

“an old Shetland word which has two meanings. Firstly, it can mean windy. It can also mean wide open space.”

The site is located approximately 40km from Skerries in water depths between 100m and 130m. Once operational, Stoura Offshore Wind Farm will produce enough clean energy to power 350,000 Scottish households.



PROJECT STATUS AND NEXT STEPS

The Stoura Offshore Wind project is in early stage development, with aerial ornithological and marine mammal surveys having commenced in 2022, and marine site characterisation surveys expected to commence in 2025. Stakeholder engagement has been ongoing since lease award and this will ramp up in advance of any marine operations commencing. Other work currently ongoing includes assessment of onshore grid-route options and substation locations, technical design work, supply chain engagement and continuation of baseline seabird and marine mammal surveys, ecological land surveys, etc.



ESB and UHI Marine Mammal Observer Training Course

As part of our commitment to the sustainable development of Stoura, ESB is providing funded training opportunities in marine mammal monitoring and mitigation in collaboration with UHI Shetland.

This course will help to develop critical local skills which will support the development of Stoura in a manner which will minimise the impact on marine mammals.



Energy for generations



University of the Highlands and Islands
Oileigh na Gàidhealtachd agus nan Eilean

Marine Mammal Observation Training Course

 24th and 25th September 2024

Join the ESB-funded training course, led by Dr. Carolyn Barton, in collaboration with the University of Highlands and Islands (UHI) Shetland.

For more information contact MMOtraining@esb.ie.

Aerial surveys of the proposed wind farm site are being undertaken to record the distribution and abundance of marine mammals and seabirds. These surveys are conducted monthly over a period of 2 years.



Photo: APEM Ltd.



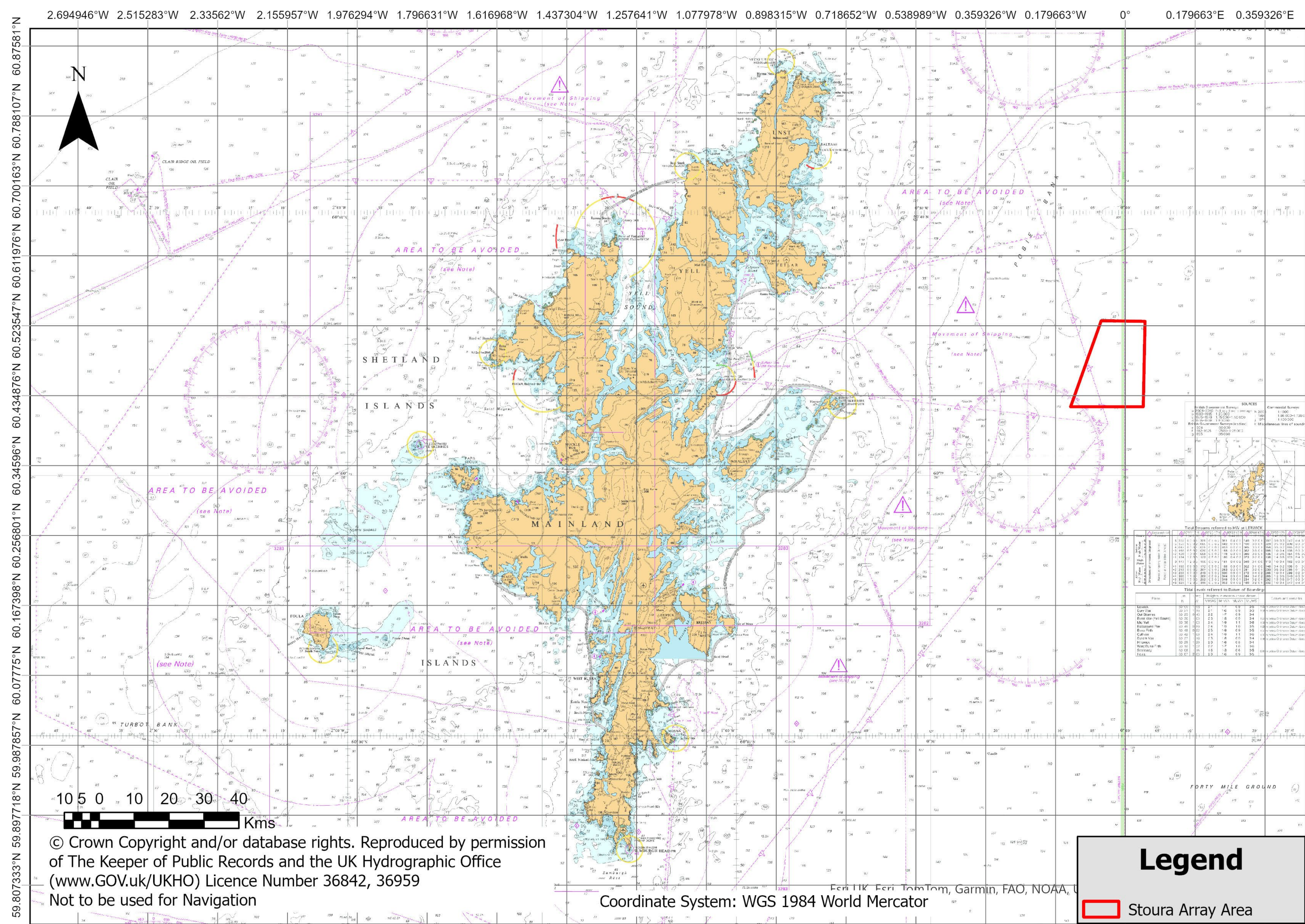
Marine fauna surveys help us to gain a better appreciation of marine life at the site and also bird populations, their movement and use of the area.



STOURA
OFFSHORE WIND



STOURA OFFSHORE WIND SEA LEASE OPTION AREA



Coordinate system: WGS 1984

Point	Latitude_DD	Longitude_DD	Degree Decimal Minutes
1	60.52910707	0.05058551	60° 31.74642427' N 000° 03.03513076' E
2	60.52988042	-0.06209536	60° 31.79282546' N 000° 03.72572180' W
3	60.42073705	-0.1409399	60° 25.24422298' N 000° 08.45639396' W
4	60.42073705	0.0461019	60° 25.24422298' N 000° 02.76611418' E



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OFFSHORE WIND



COMMUNITY ENGAGEMENT AND PARTNERSHIP

ESB believes that it has a unique responsibility by virtue of its heritage and values to support government and SIC policy to fight climate change by leading the low carbon transition. In doing so, we are committed to playing a strong role in developing offshore wind with due care for our social, economic and environmental responsibilities.

We commit to proactively engage with the public and particularly those communities most likely to be affected by the project. We will do this in at least five ways:



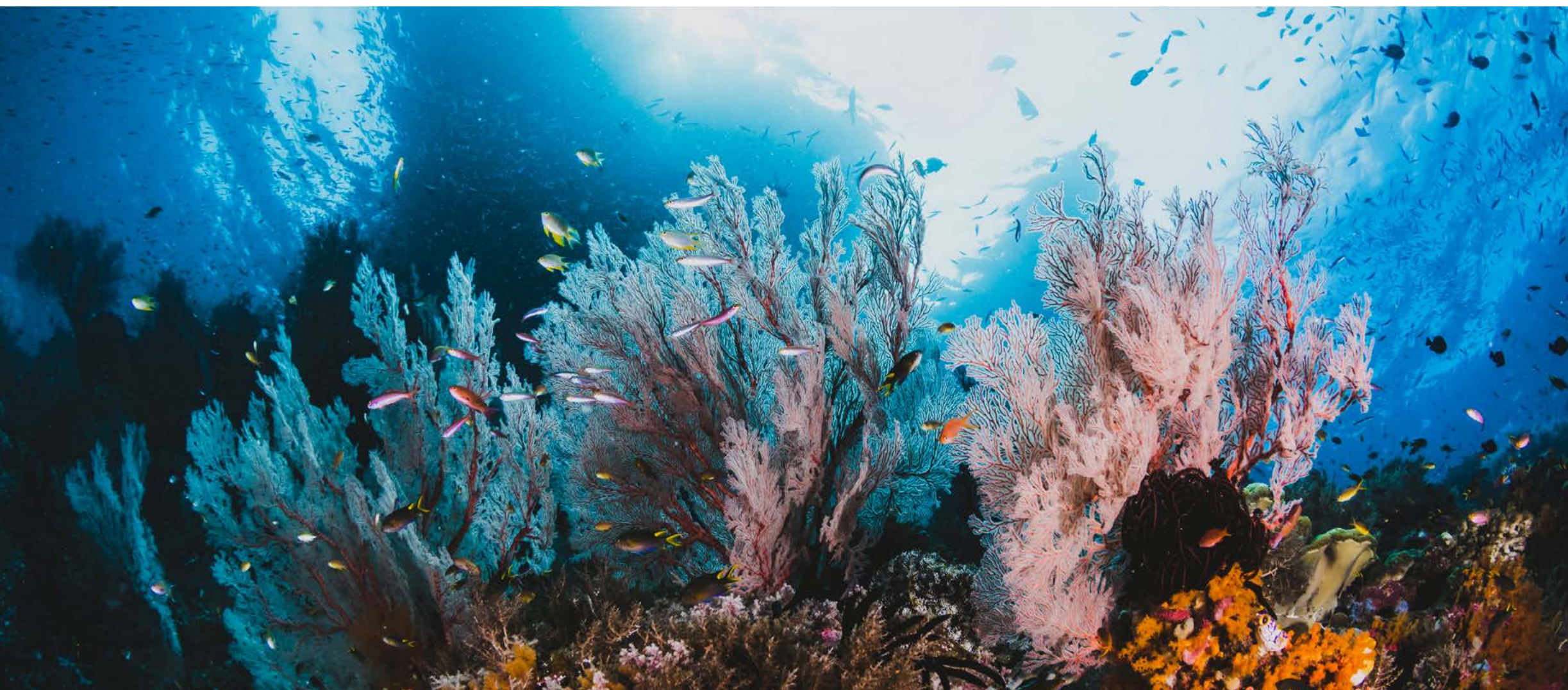
We will share all relevant information about our offshore wind projects in a comprehensive and timely fashion. We will listen to the concerns of the local communities, and we will work in partnership with those communities to resolve any issues that might arise.



ESB is committed to the long-term environmental monitoring of Stoura and will work with UHI Shetland to understand how we can replicate the success of the SOTEAG model.



ESB has a long track record of establishing Community Benefit Funds for our renewable energy developments. The project team intend to continue this for Stoura and are working to understand how any local benefit fund should be structured.



We will show due respect for our marine environment at all times, and we will work only to the highest environmental and ethical standards.



We are working with key representatives of the fishing industry to better understand the marine environment around Shetland.



PROJECT SUPPLY CHAIN AND ASSOCIATED OPPORTUNITIES

ESB is committed to supporting local suppliers in the development of our Stoura Offshore Wind project. Since securing a lease option in 2022, we have consistently engaged with representatives of the local supply chain through regular update meetings facilitated by Highlands and Islands Enterprise (HIE), the signing of a Memorandum of Understanding with Lerwick Port Authority and the co-hosting with Shetland based companies and agencies of stands at major national energy conferences.

As part of our commitment to developing Stoura in a manner which provides opportunities for the local supply chain, ESB commissioned a local capabilities study by the Shetland based consultancy Voar. This report will be a key input into the selection of a suitable floating platform for Stoura along with the development of our transport and installation and operation & maintenance strategies.

This approach will help to ensure that the selected solution for Stoura is compatible with existing and planned Shetland capabilities.



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Should you wish to contact ESB regarding this aspect of the Stoura Offshore Wind project or to inform us of the services your organisation may offer, please visit the supply chain section of our website at www.stouraoffshorewind.com or contact any member of our team.

Floating Wind Turbine Types

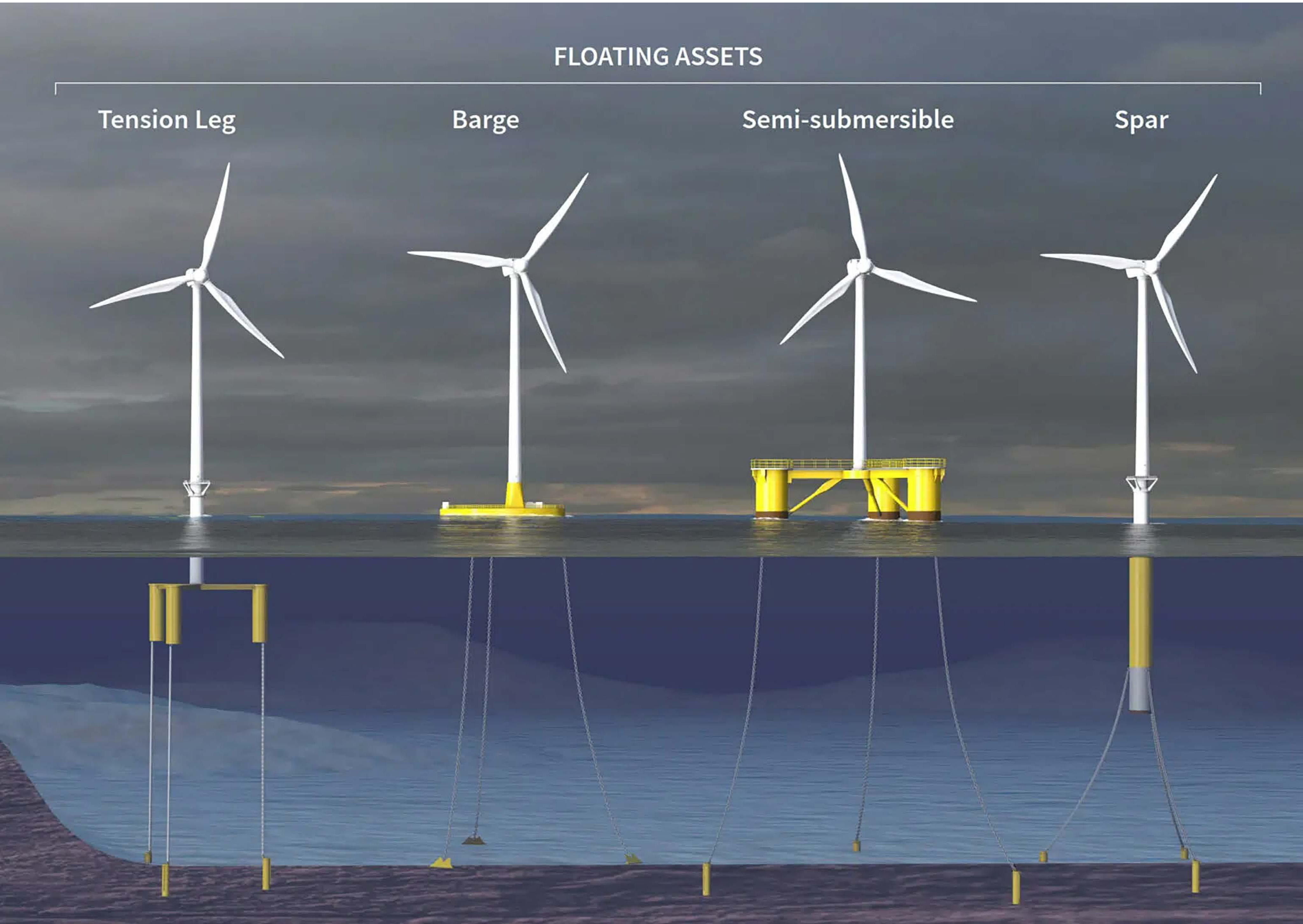
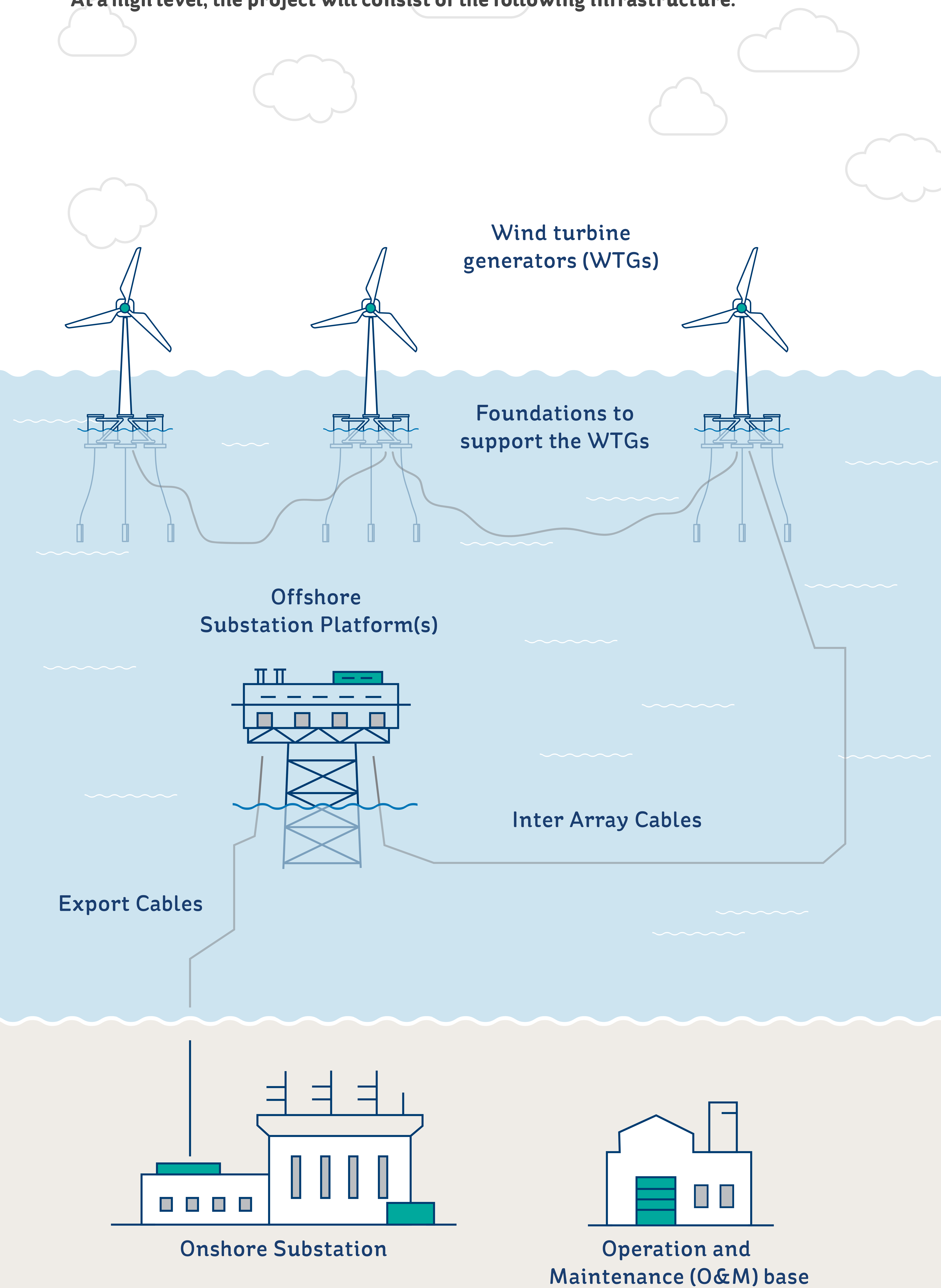


Image: Acteon



PROJECT INFRASTRUCTURE

At a high level, the project will consist of the following infrastructure:



ESB: DELIVERING OUR NET ZERO AMBITION

ESB believes that to achieve a net zero integrated energy system, four key elements need to be put in place. These are renewables, green hydrogen production, green hydrogen storage and back-up green hydrogen-fuelled electricity generation which produces zero carbon emissions.

This will also deliver security of supply by reducing dependence on fossil fuels and allow the development of “home-grown” energy from natural resources.

ESB is actively investing in all elements of the Energy Transition to Deliver Net Zero



Renewables



Backup Dispatchable Zero-Carbon Power & Flexibility



Hydrogen Storage



Hydrogen Production

Decarbonisation through Green Hydrogen



Brighter Futures Strategy

Delivering Net Zero by 2040
Hydrogen is a Key Enabler for ESB Strategy



Low Carbon Electricity Generation

Electricity generation that does not emit carbon dioxide:

Onshore & Offshore Wind, Solar, Hydro, Pumped Storage



Electricity Supplier

Has agreements in place with Low Carbon Generation and Hydrogen Production facility.



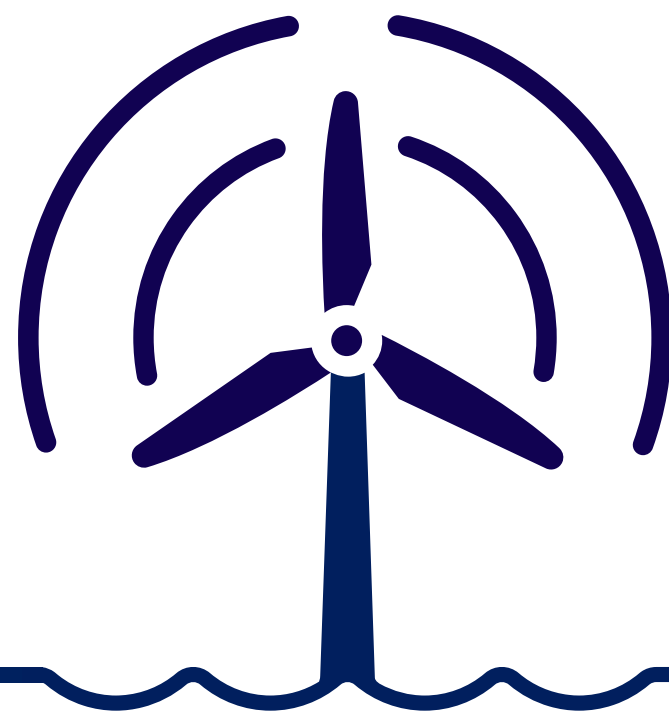
Hydrogen Production

Electrolyser producing Green Hydrogen.
To optimise Energy Security, coupled with Storage where needed.



End User

Industrial process or Energy user decarbonising where hydrogen is used to replace fossil fuel usage.

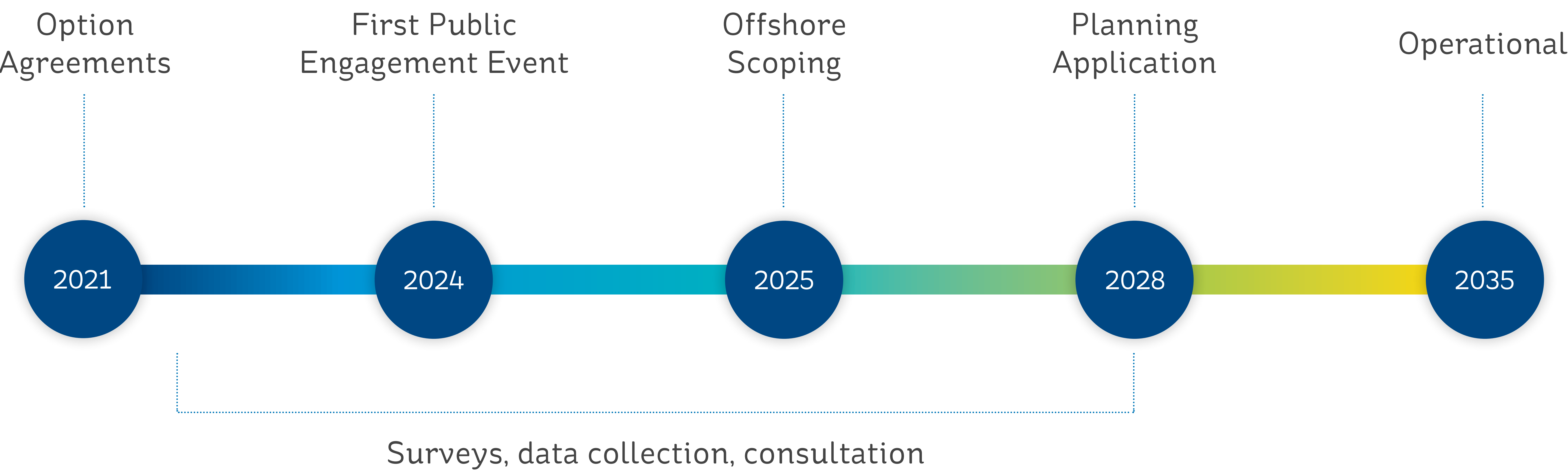


STOURA OFFSHORE WIND PROJECT & TIMELINE

Offshore Substation



It is very difficult at this early stage to predict when key milestones in the development of Stoura will occur. The diagram below is our current best estimate of the project delivery timeframes.



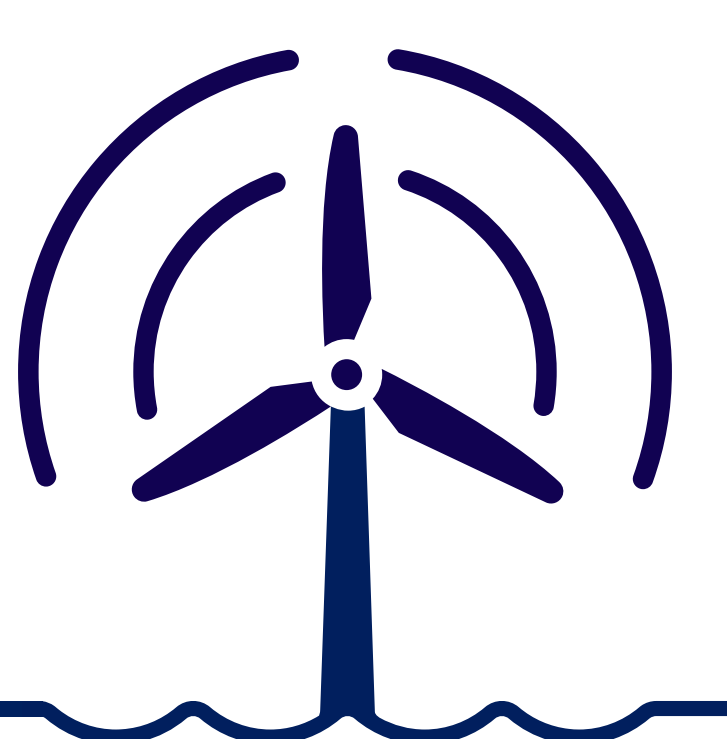
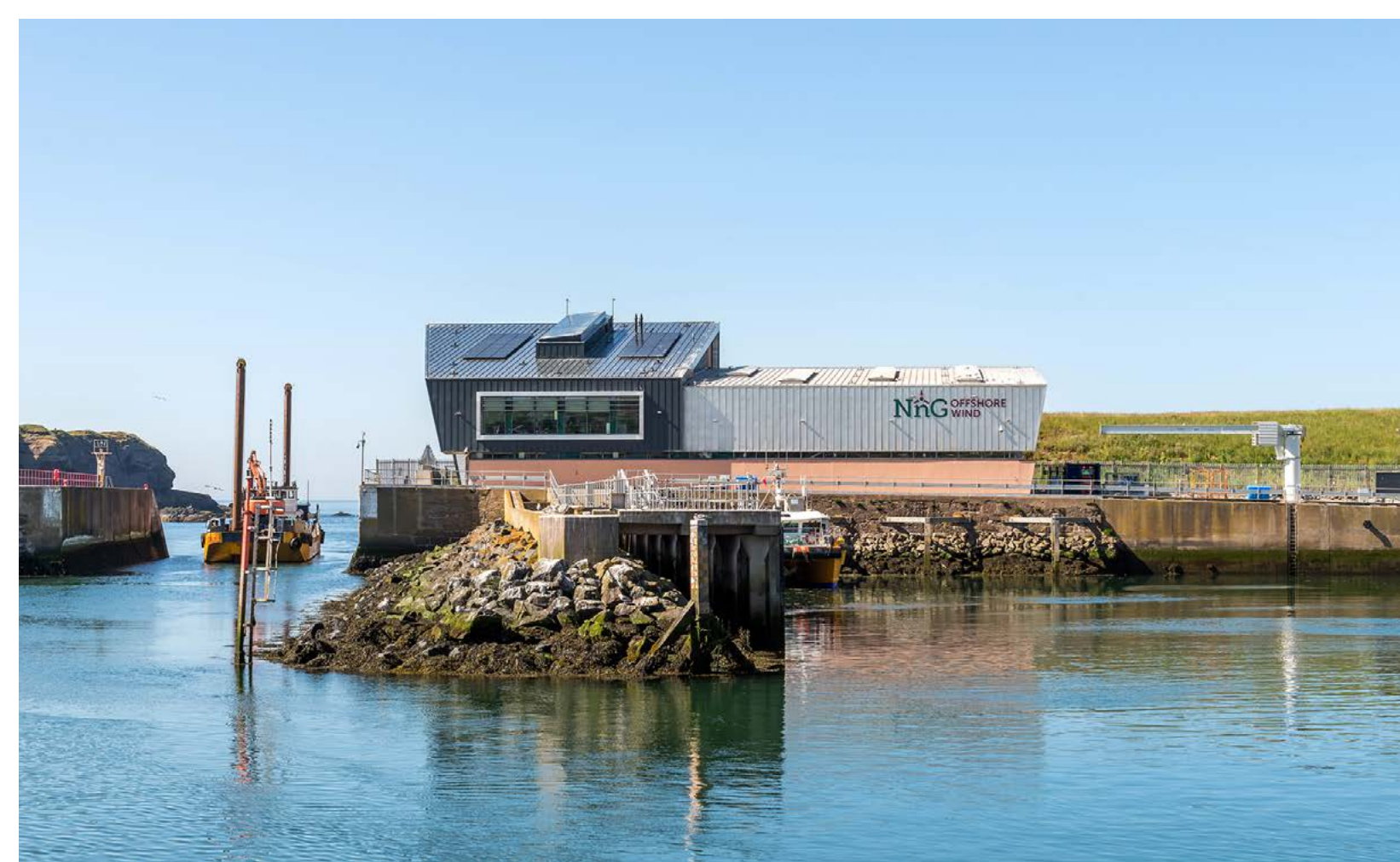
The ultimate project, construction and operation of the wind farm itself, will be subject to a number of consents, including a Section 36 Consent, Marine Licence offshore and Shetland Island Council Works Licence, as well as Planning Permission onshore.



CASE STUDY: NNG O&M FACILITY

In early 2023, ESB and its partners EDF opened an operations and maintenance (O+M) base in Eyemouth, Berwickshire on the East Coast of Scotland. This state-of-the-art facility will service the needs of the 450 MW Neart na Gaoithe (NnG) wind farm. Whilst NnG is a fixed offshore wind farm and is closer to shore, it is a similar scale to Stoura and so this O+M facility is a useful reference for what ESB would hope to develop in Shetland.

- Eyemouth has a population of c. 3,600 people and is a working fishing port.
- NnG is located c. 35km from the O+M base.
- The three storey facility provides 1,050m² of office accommodation and control rooms, and 530m² of warehouse storage.
- The O&M base will create up to 50 high quality jobs in Eyemouth Harbour for the 25-year lifespan of the wind farm.
- The base monitors the performance of the wind farm and coordinates the extensive logistics necessary for all O+M activities.
- The building services as a base for training, retraining and apprenticeship opportunities which are offered locally.
- Increased staffing for maintenance in the summer months brings additional economic benefit to the surrounding area.
- The O&M base was sensitively designed by Corstorphine + Wright architects and built by Fife-based Muir Construction.
- The land on which it is located is leased from Eyemouth Harbour Trust with the revenues from the lease supporting further investment by the Trust in the harbour itself.
- Alongside the O&M base, a high-quality berthing pontoon has been installed on the marine side of the harbour.



CONTACT OUR TEAM



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For any feedback, questions
or comments please contact our team.



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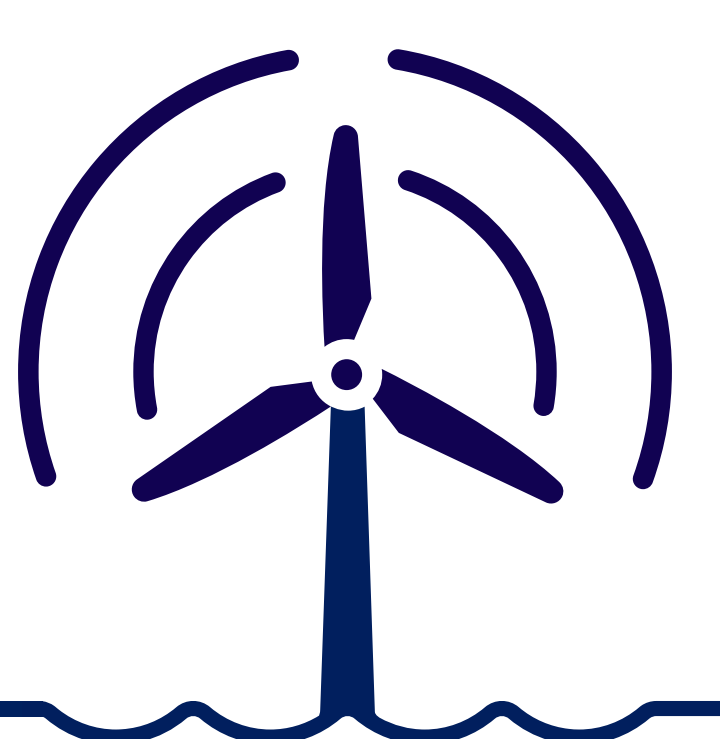
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THANK YOU FOR ATTENDING



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Photo: TetraSpar Demonstrator ApS