



LLŶR

Welcome

to our public consultation on Llyr 1 – an innovative floating wind farm in the Celtic Sea.

Llyr 1 is a test and demonstration floating wind farm array, situated in the Celtic Sea off the Pembrokeshire coast.

The output of the floating wind farm is expected to power just over 100,000 homes¹ with clean, green energy.

We are contributing to accelerating the development of the UK floating offshore wind industry as a pathfinder project, piloting the development, construction, installation and operation of floating offshore wind at a large scale in UK waters.

Not only will this help deliver clean energy, but it will also create significant opportunity for training, employment as well as manufacturing and supply chains in Wales as global demand for floating offshore wind rises.

This consultation focuses on proposals for Llyr 1. We're also developing a sister project (Llyr 2) and we will consult on this once we have further developed our proposals.

Llyr 1 and Llyr 2 will set a new standard for cost reduction pathways for large scale floating offshore wind developments, they will:

- Act as a pathfinder to accelerating floating offshore wind development.
- Provide the opportunity not only to better understand the benefits and challenges but also to identify opportunities to enhance the local environment.
- Maximise the local supply chain and employment opportunities, thereby contributing to the local and regional economy.

1. Based on R-UK statistics
<https://www.renewableuk.com/page/UKWEDEexplained/Statistics-Explained.htm>



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What is floating offshore wind?

The UK and Welsh governments have each set legally binding commitments to become net-zero by 2050. Offshore wind can play an important part in this, with the UK government targeting 50 gigawatts of wind energy by 2030. That would be enough to power every home in the UK.

Currently, most wind turbines are secured to the seabed using large, deep drilled, pile foundations which can generally only be installed in shallower waters (less than 50 metres). Floating offshore wind instead uses turbines based on floating structures, fixed to the seabed by a mooring system – this means they can be located in water depths not feasible for fixed bottom turbines.

Floating wind technology has the potential to unlock new areas – including the deep waters off the Welsh coast – and provide a significant contribution to an increase in offshore wind power.

Why develop floating offshore wind?

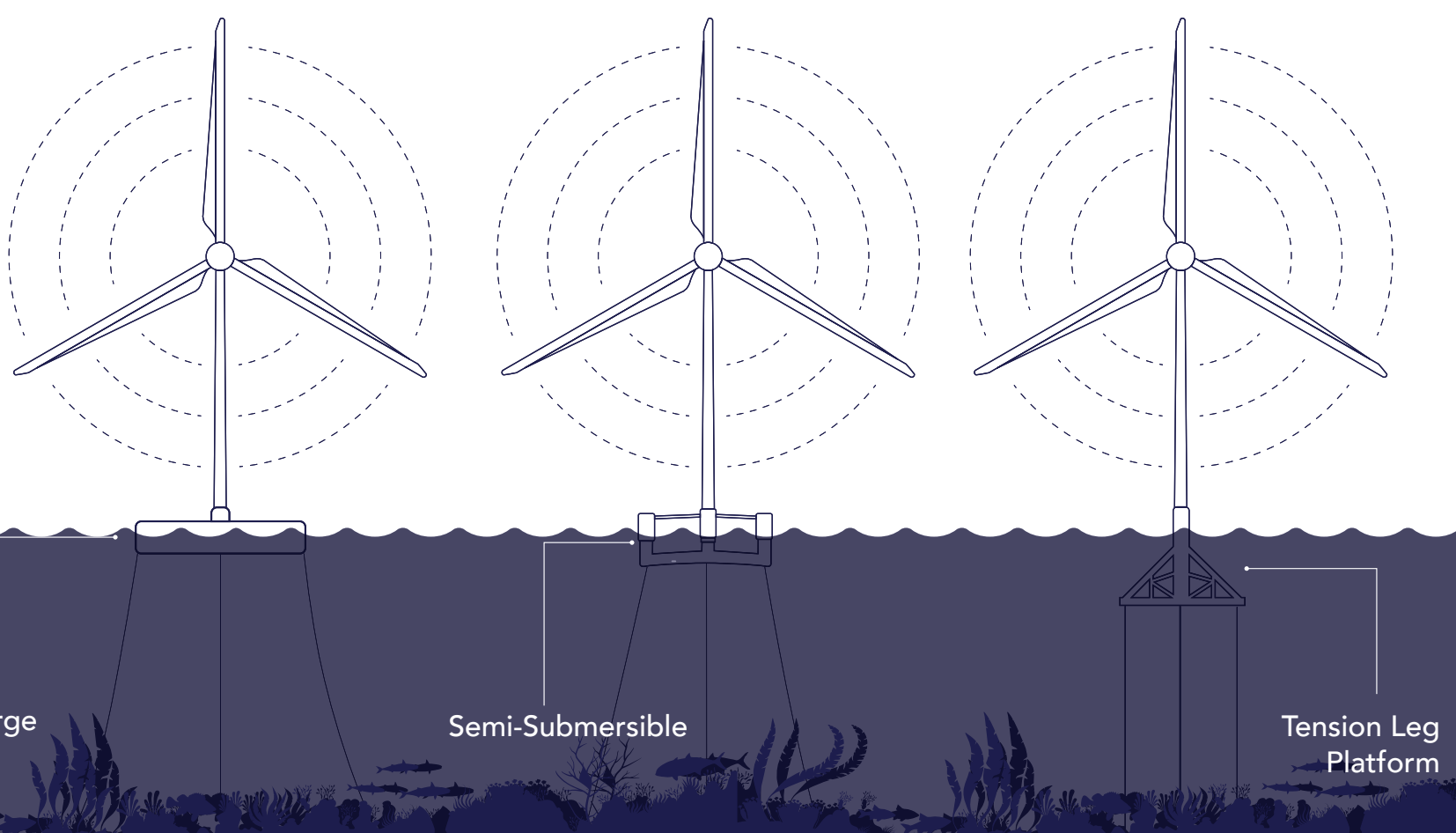
- Potential to unlock new areas for offshore wind in deeper waters where traditional fixed turbines are not viable.
- Reduced visual impact compared to wind farms closer to the shore.
- Contribute to net zero by 2050 target.
- Diversify and secure the UK's energy supply.
- Potential for major employment and supply chain opportunities.

What is Net Zero?



Net zero refers to the balance between the amount of greenhouse gas (GHG) that's produced and the amount that's removed from the atmosphere. To meet the government's net zero target, the GHG emissions produced by the UK would need to be equal or less than the emissions removed from the environment. Offshore wind is a vital step to achieve net zero.

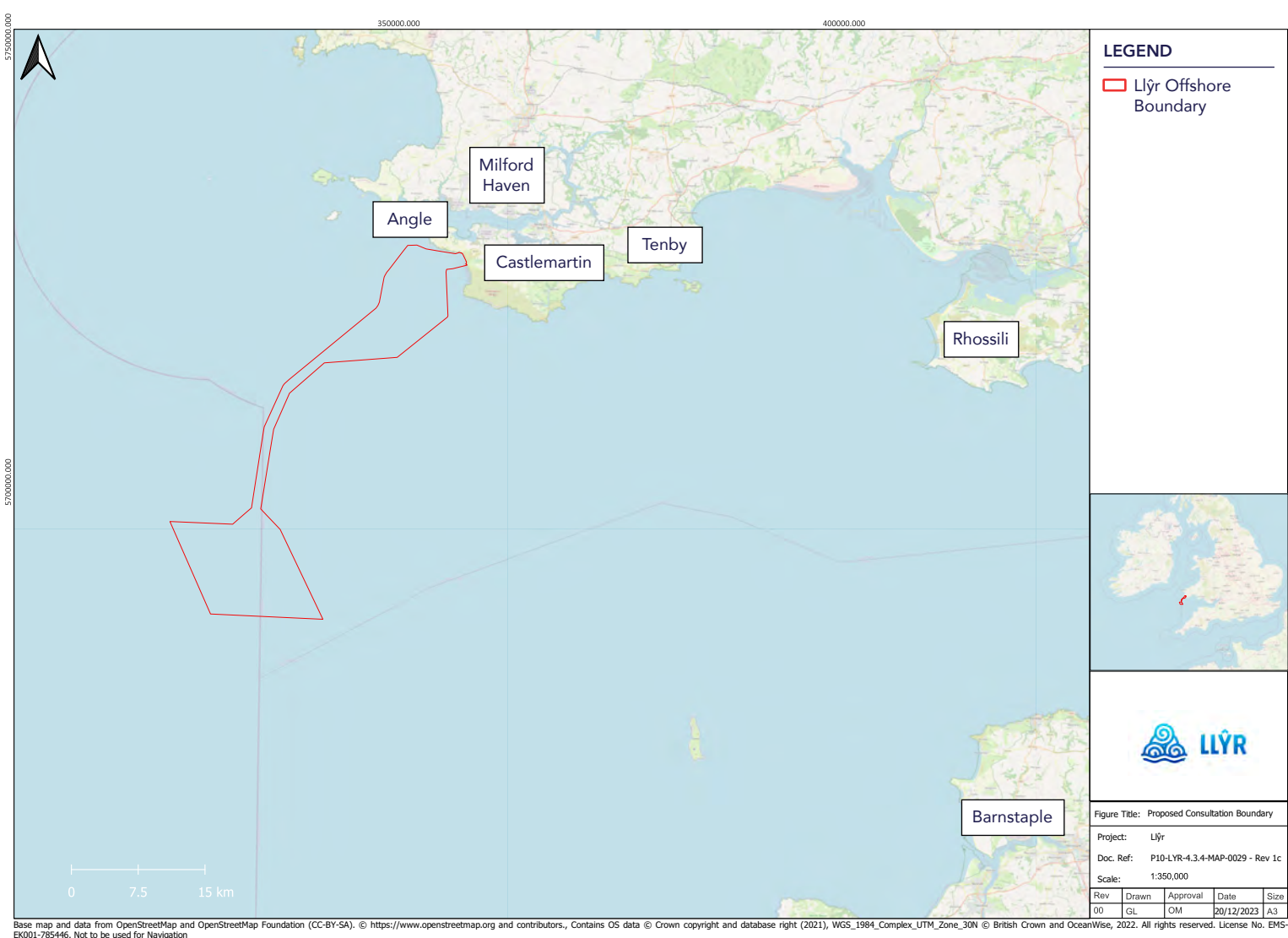
As Llŷr 1 is a test and demonstration project, we're still deciding which platform and mooring technologies we will use. We're considering one of the following types as shown in the diagram below.



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Our offshore proposals

LLYR 1 will be located in the Celtic Sea. At its closest point, the project will be approximately 36km from the Welsh coastline, 55km from Lundy Island and 72km from the Devon coastline.



Our offshore infrastructure would include:

- Up to 10 Wind Turbine Generators (WTGs).
- Up to 10 floating platforms.
- Mooring infrastructure.
- Up to 11 inter-array cables to connect the WTGs.
- Up to two electricity export cables, within one export corridor to the landfall location at Freshwater West.

As is common with major infrastructure projects, we have adopted a 'design envelope' approach where we will use maximum worst case scenario parameters to assess the effects of the project. This provides some flexibility and enables the proposed Project to capitalise on technology developments.



You can find out more in the 'Our offshore proposals' section of our consultation brochure.





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Our onshore proposals

The offshore cables will bring the power to the shore. It then needs to be transported to the point at which we can connect to the National Grid.

The closest connection point is adjacent to Pembroke Power Station and we have applied to National Grid Electricity System Operator (NGESO), the organisation responsible for connections to the National Grid, to connect here.

To enable this, we need to construct some additional onshore infrastructure.

Our onshore works would include:

- Up to two export cables between the landfall location (shore) at Freshwater West and the project substation.
- A connection point between the offshore and onshore infrastructure.
- A substation and control building.
- Up to two export cables between the project substation and the grid connection point.
- Temporary works to allow us to construct the onshore infrastructure.

Legend

□ LŶr Onshore Project Boundary

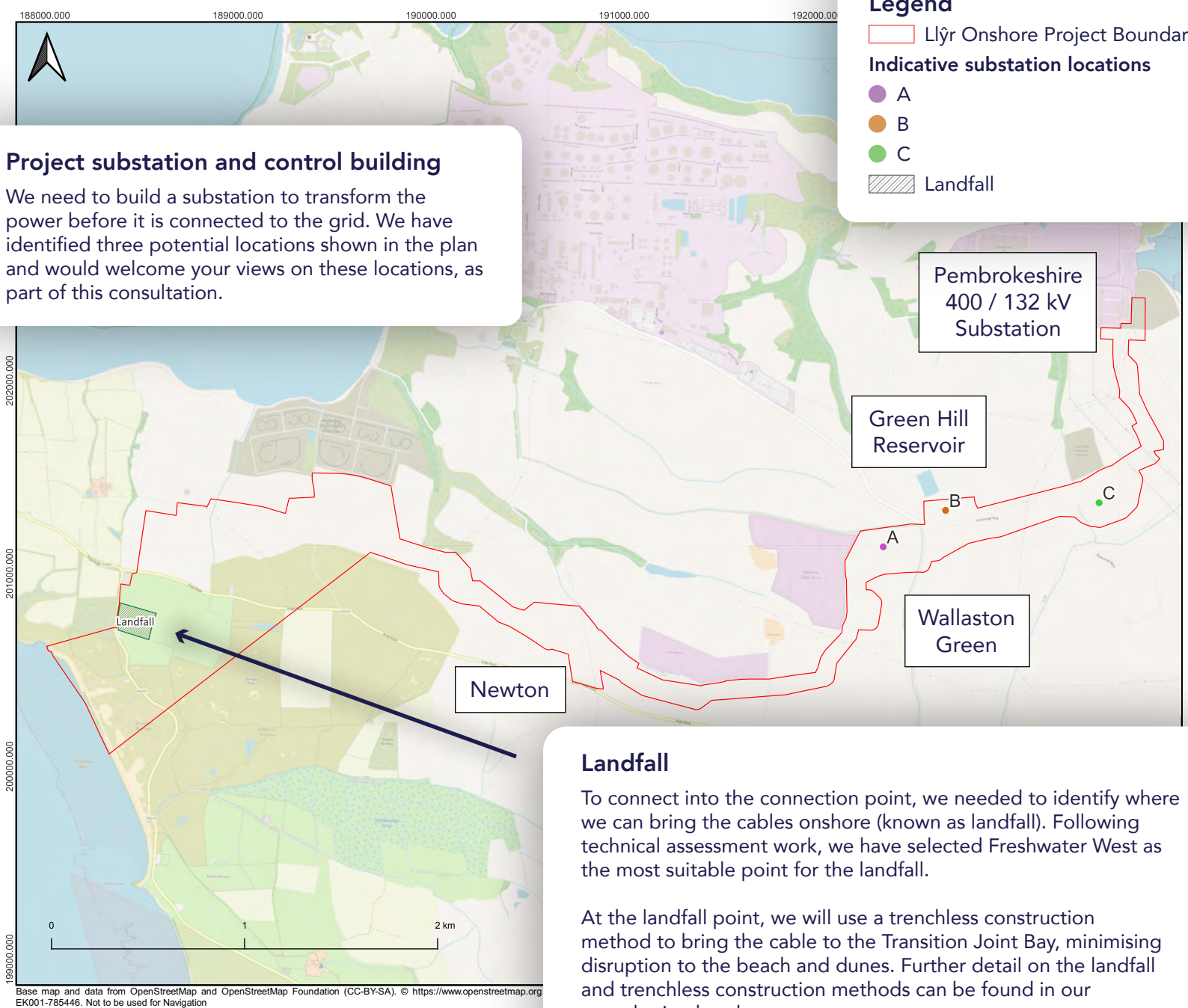
Indicative substation locations

● A

● B

● C

▨ Landfall



You can find out more in the 'Our onshore proposals' section of our consultation brochure.



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Understanding our environmental impact

We're currently undertaking an Environmental Impact Assessment (EIA) to understand the potential effects of the project on the environment and local communities and to identify ways in which any impacts could be avoided or mitigated.

The findings of our EIA will be presented in a document known as an Environmental Statement which will be submitted as part of our applications for consent.

Our EIA considers the following topics:



Offshore

- Physical Environment
- Benthic Ecology
- Fish and Shellfish Ecology
- Marine Mammals
- Ornithology
- Marine Archaeology
- Shipping and Navigation
- Commercial Fisheries
- Other Sea Users
- Seascape, Landscape and Visual
- Aviation and Radar



Onshore

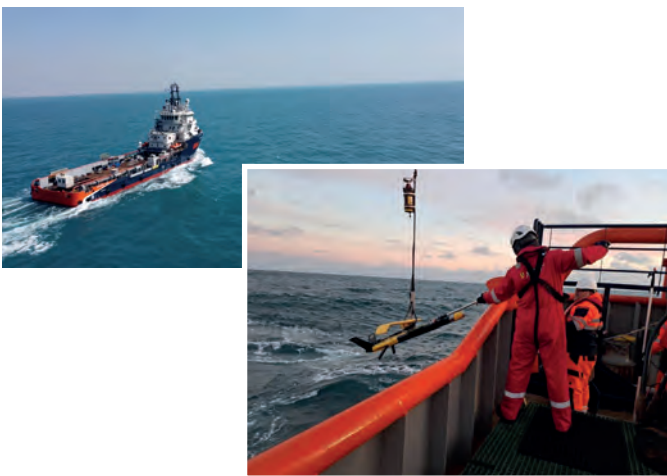
- Landscape and Visual
- Ecology and Biodiversity
- Historical Environment and Cultural Heritage
- Water Environment
- Geology and Hydrogeology
- Agriculture and Soils
- Traffic and Transport
- Air Quality
- Noise and Vibration
- Socio-economics, Recreation and Tourism



Project wide

- Climate Change
- Major Accidents and Disasters
- Cumulative Effects (in each technical chapter)
- Residual Effects

We're also undertaking a Habitats Regulation Assessment. This assesses whether the development could have adverse effects on the integrity of designated sites that are protected by the Conservation of Habitats and Species Regulations 2017 (as amended).



Photos: We've carried out a number of surveys to inform our EIA, including offshore geophysical surveys and benthic habitat surveys.



To help inform this consultation, we have undertaken a preliminary assessment of the likely significant effects and details can be found in the 'Understanding our environmental impact' section of our consultation brochure.

'Significant effects' is a technical term, which is used in EIA to identify environmental factors that require further assessment. Identifying a 'significant effect' does not mean it will definitely happen. By identifying them at this stage, we can explore opportunities to manage the potentially significant effects.



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Community benefits

Llŷr 1 represents a major investment opportunity for the local area, Pembrokeshire and Wales and we want the local community to benefit from our investment. We are currently working with local stakeholders to examine how we can secure the best possible economic, social and environmental benefits from the project. As part of this consultation, we want to hear your views on how the project can benefit the community.

We're working in the following areas:



Education and outreach



We are developing education and outreach programmes that are based on floating offshore wind, inspiring the younger generation to consider energy projects and new technology in a first-hand way.



Skills and training



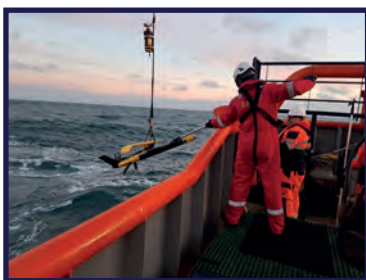
As the offshore wind industry develops it will create long-term sustainable job opportunities. We're working with a range of stakeholders and interested parties across Wales, to make sure that we understand our future labour requirements and how this can benefit the local community.



Supply chain development



We are committed to maximising this opportunity for ports and local businesses to support a sustainable economy by working with key supply chain partners, local authorities, industry bodies and government organisations to understand capacity and capability, enabling us to build long-term relationships and a sustainable legacy.



Environmental research



Llŷr 1 will be able to support environmental research supporting how floating wind interacts at a large scale with the natural environment enabling better understanding of the benefits and challenges and identify opportunities to enhance the local environment.



Community involvement



We are working with local community groups and interested parties to assist in engaging young people to build a sustainable talent pipeline for the future. We provide opportunities for young people to take part in programmes that share their experiences and assist in making a difference to their lives and future career choices.



You can find more about our work in these areas in our consultation brochure.



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Gaining consent

To build and operate Llŷr 1, we will need to apply for the following consents:

Section 36 consent under the Electricity Act 1989:

This would allow us to build and operate an offshore generating station (the wind farm) and would also include deemed planning permission for the onshore works. This means that consent for our onshore works would be considered as part of the section 36 application. Planning and Environment Decisions Wales (PEDW) administering on behalf of the Welsh Ministers is responsible for determining this type of application.

Marine Licence under Part 4 of the Marine and Coastal Access Act 2009:

This would allow us to carry out certain activities in the marine environment, such as works on the seabed and the establishment of moorings. Natural Resources Wales administer Marine Licence applications on behalf of the Welsh Ministers.

Whilst Pembrokeshire County Council and Pembrokeshire Coast National Park Authority are not the decision makers on either of the applications, they are included as statutory consultees on both applications.



Next steps



February 2024

- Review of consultation feedback and use to finalise applications for consent.

Spring 2024

- Anticipated S36 and Marine Licence application submissions.
- At this stage, there will be an opportunity for you to make a representation on the application. Information on how to do this will be provided at this point.

Late 2026 to Mid 2028

- We anticipate a 6 to 8 month construction period for the onshore cabling works, within this time frame, subject to consents.



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Have your say

We'd like to hear your views on our proposals for Llyr 1. You can respond to this consultation in the following ways:



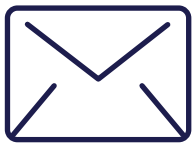
Online

Fill in our online response form at www.llyrwind.com



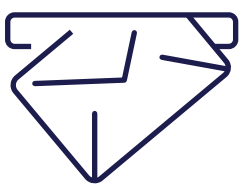
In person

Fill in a response form at one of our consultation events



Email

Write to us or send your completed response form to our project email: info@llyrwind.com



Post

Write to us or send your response form to:
**Floventis Energy Limited, Office 20,
Bridge Innovation Centre,
Pembrokeshire Science and Technology
Park, Pembroke Dock, SA72 6UN**

Please submit your feedback by 23:59 on 11 February 2024.



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