



Blue Gem Wind

# Floating Offshore Wind

A new generation of  
energy in the Celtic Sea

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Community Newsletter  
Autumn 2020

# Welcome to the Blue Gem Wind Newsletter

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I am delighted to introduce our first community newsletter which I hope will tell you more about our vision for floating wind in the Celtic Sea, introduce the team and describe our work to date. We see this as just the beginning of a conversation as we work towards delivering Wales' first floating offshore windfarm in 2027, and welcome your feedback and comments as we begin wider stakeholder engagement in challenging and uncertain times.

I do hope you enjoy reading about Blue Gem Wind, our plans, and manage to join us in November at the start of our public exhibition events. Please don't hesitate to contact us at the main project office in Pembroke Dock using the contact details on our website.

We have distributed printed versions of this first newsletter to all houses throughout the Angle Peninsula, ensuring as many people as possible get to hear about our exciting project. From a sustainability perspective we will issue all further newsletters electronically so please sign up to receive them on our website.

[www.bluegemwind.com](http://www.bluegemwind.com)

Best wishes

Hugh Kelly  
Project Managing Director



# Blue Gem Wind

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Simply Blue Energy, a pioneering Celtic Sea energy developer, and Total, one of the world's largest energy companies, have established a partnership to develop floating wind projects in waters of the Celtic Sea. The joint venture, Blue Gem Wind was announced in March 2020 and opens a new chapter in the development of offshore energy in the UK.

Our overall vision is to create a new low carbon offshore energy sector in the Celtic Sea that contributes to climate change targets, provides high skilled jobs, supply chain diversification and energy security. To deliver this vision we feel a stepping stone approach to developing floating wind in the Celtic Sea is critically important.



**TOTAL**



**Simply Blue**  
Energy



# Floating Wind

For us, floating offshore wind combines two technologies that have been proven throughout the world, oil and gas platform technology and wind turbines. This means we can move into deeper waters with higher wind speeds and less visual impact, opening up a whole new world of offshore renewables.

Today's offshore wind turbines, fixed to the seabed by monopile or jacket foundations, are restricted to waters of up to 60 metres deep. Moving further offshore is where floating wind has enormous potential to be a core technology in delivering on climate change goals.



## Untapped wind resources

Almost 80% of the world's wind resource is in water deeper than 60 metres.



## Reduced visual impact

Floating wind is further offshore meaning less visual impacts and reduced conflicts with other marine users.



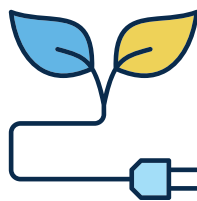
## Fast, consistent wind

It is where windspeeds are faster and more consistent meaning higher capacity factors.



## UK energy security

It will provide energy security and could help balance the UK's energy system.



## Helping local economies

It is estimated by the ORE Catapult that the first GW of floating wind in the Celtic Sea could potentially deliver over 3,000 jobs and £682m in supply chain opportunities for Wales and Cornwall by 2030. 17,000 UK jobs generating £33.6 billion for the UK economy by 2050.



## Net-zero emission targets

Floating wind is critical to meeting the UK's net-zero emission targets and is needed to deliver on ambitions set by the Climate Change Committee.

# What is Project Erebus?

## Blue Gem Wind will initially focus on a 96MW demonstration project, Erebus.

The project, named after the famous ship built in Pembroke Dock in 1826, will become one of the largest floating offshore wind projects in Europe when constructed in 2027. The project is located 45KM offshore, significantly reducing visual impact and potential conflict with other users. To initially identify the site we considered a range of potential constraints including Fishing, Conservation Areas, Shipping, Distance from Port, Seabird Sensitivities, Landscape and Visual Impact, Wave Height, Sediments and Windspeed. Erebus is approx 0.02% of the Celtic Sea area and 0.14% of the Welsh Marine Planning Area.



### Low carbon power generation

Erebus 96MW = 89,488 homes powered per year

7-10 platforms depending on turbine size



The project will cover 0.14% of the Welsh Marine Planning Area



Minimum operation life of a floating wind farm = 25 years



Distance from shore = 45 km significantly reducing visual and potential conflict with other marine users

Planned installation 2026-2027

# The Environment and Future Generations

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Climate change is viewed as one of the biggest threats to marine ecosystems worldwide. It is recognised that floating wind will become a key global technology in climate change mitigation with the Celtic Sea essential to reach the UK's net-zero target. Even though floating wind will be a part of the solution for a cleaner and safer future, providing new green jobs for future generations, any activity in the marine environment has the potential to impact on seabirds and other marine life.

In order to minimise impacts on wildlife and habitats we are following international best practice and are undertaking research, environmental surveys, assessment, monitoring and modelling as part of the project design. The project team continue to engage in pre-application discussions with Natural Resources Wales, JNCC and other relevant authorities / organisations in order to inform the scope and detail of the project related Environmental Impact Assessment (EIA). An Environmental Statement (ES), which will specify and describe the anticipated effects of the project, is due to be completed at the end of 2021. This ES will be submitted to the decision-making authorities and published on our website. <https://www.bluegemwind.com/planning/>



**Sample photomontage for  
a Principle Power Platform  
with GE12MW Halidade  
Turbine at beach level  
Distance 45km**

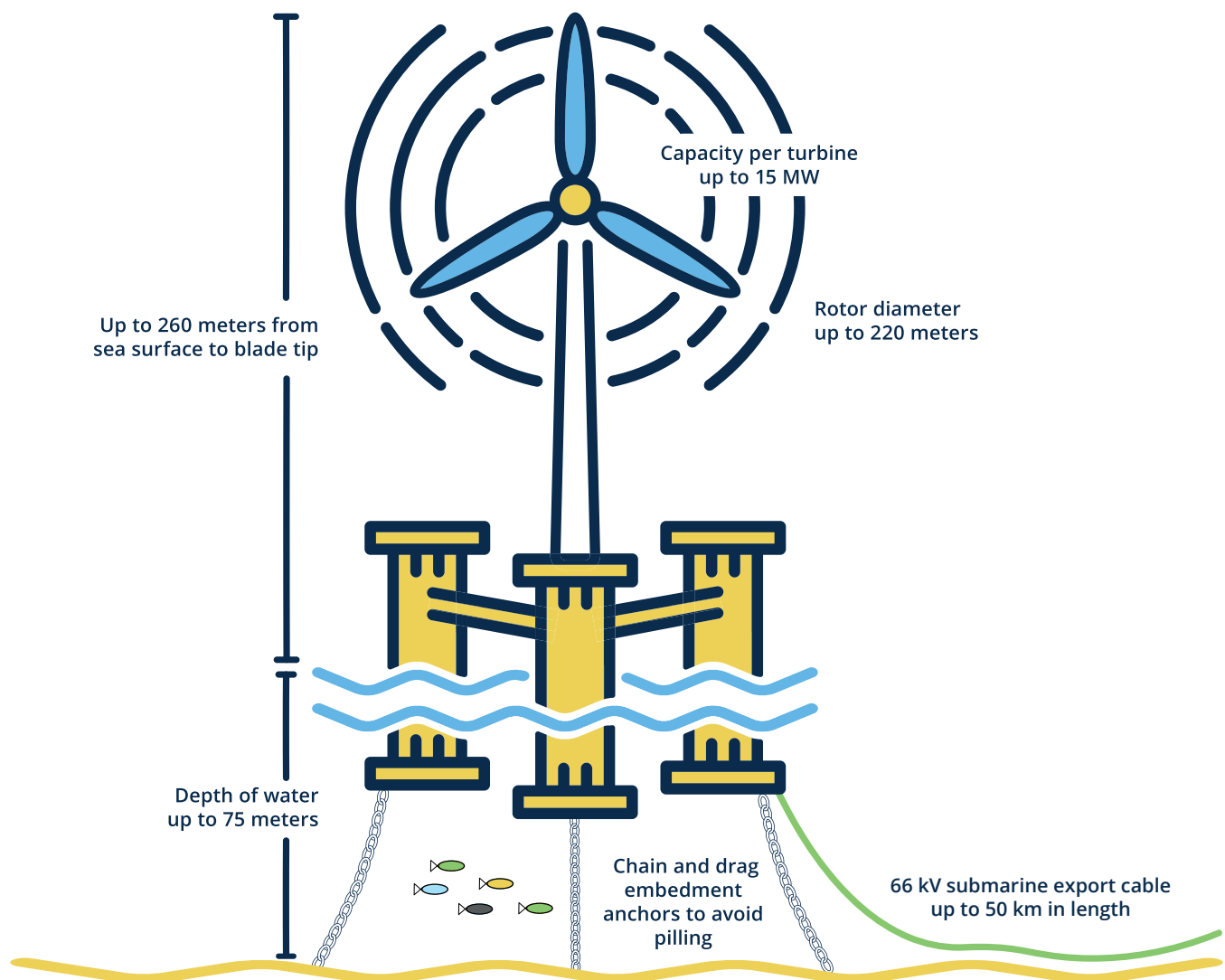
**Studies suggest that turbines will be  
difficult to discern at this distance.**

**They may only be visible in  
exceptionally clear weather and  
with concentrated viewing.**



# Anatomy of a floating wind turbine

Whilst the turbine manufacturer has not yet been decided, we are working with Principle Power Inc who will provide the floating platforms and project support. Principle Power's Windfloat® is one of the most advanced floating technologies in the world.



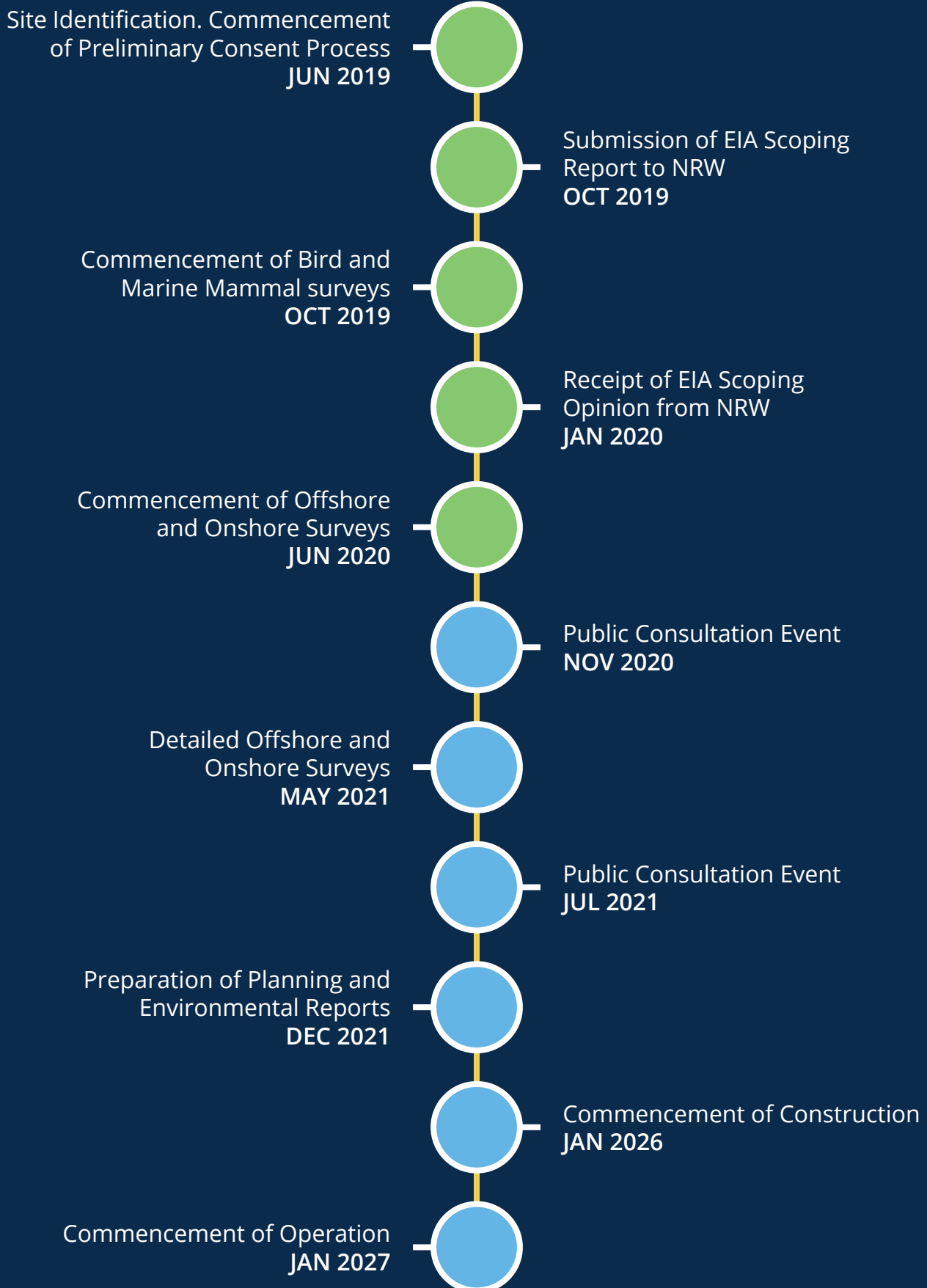
Independent studies have suggested there could be as much as 50GW of electricity capacity available in the Celtic Sea waters of the UK and Ireland. This renewable energy resource could play a key role in the UK meeting the 2050 Net-Zero target required to mitigate climate change.



Net-zero emission targets

# When?

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# Keeping you up to date

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## Sea Bed Lease

In August we were delighted to be awarded an Agreement for Lease from the Crown Estate. This award of seabed rights will allow us to progress with environmental assessments and surveys, and seek a planning consent for the Erebus project through the statutory processes.

Minister for Environment, Energy and Rural Affairs, Lesley Griffiths, said: *"The climate emergency means we will need much more renewable energy to meet our needs, and Welsh Government has supported the development of marine energy for many years. I am pleased to welcome this next step in harnessing the potential for energy identified in the recently published Wales National Marine Plan. We will continue to ensure projects bring sustainable jobs and investment to Wales whilst delivering on our legally binding climate commitments."*

## Offshore Surveys

We recently began a number of offshore activities that are critical to an early stage of any offshore wind project. This has involved using vessels and equipment to survey the proposed site, the potential cable routes back to shore and begin to establish in more detail the wind and wave climate. We have also been carrying out bird and marine mammal surveys for sometime now to ensure we can provide the best environmental data to the planning authorities.

## Supply Chain Database

We have recently launched our online supply chain database to enable onshore and offshore suppliers to connect with us. The high level project timelines give an indication of when supply chain skills and services may be required and through the database you can detail how your capabilities match the project needs.

*"We are delighted that in over £10M of contracts awarded to date, the UK content is 85%. This demonstrates UK skills in project development and our approach to maximising local content where we can."*

Hugh Kelly, Project Managing Director

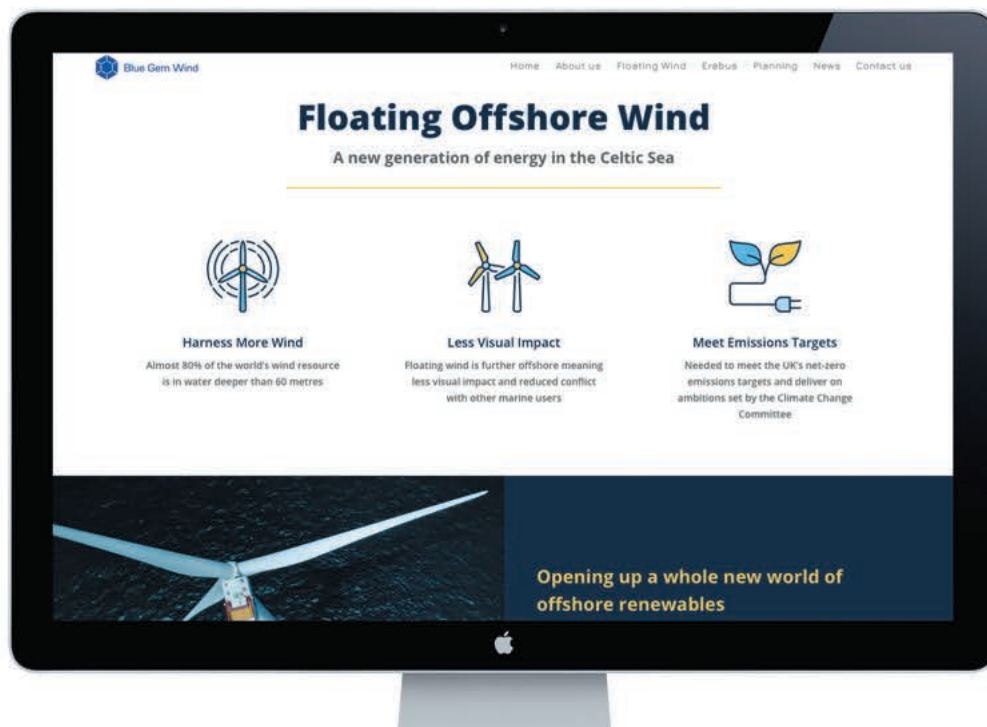


## Project Website

Our project website is now live and contains information about us, floating wind, the Erebus project and has a planning page which holds all our planning related reports for you to view. We have also recently joined twitter and LinkedIn where we will use these platforms to provide the most up to date news. You can also sign up for ongoing newsletters and get in touch to ask questions.

## Public Consultation Events

During the week of November 16<sup>th</sup> we will be carrying out our first public consultation events. This will be an opportunity for you to meet some of the team and hear about our plans for project Erebus. Ideally these events would be carried out in local village halls where you can drop in at set times of the day to have your say on the project. Because of COVID19 this traditionally accepted way of providing a location to have a conversation is unlikely to occur. We are currently planning an online solution, likely to be a virtual exhibition room, where you will still get to see all the usual information, meet the team, ask questions and provide written and oral feedback. We apologise in advance for any inconvenience caused and are working hard to make the online experience as accessible as possible.



# This month's featured team members

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Our team is made up of a group of innovative and dynamic individuals who are genuinely passionate about creating and enabling the move to green energy.

To give you a deeper insight into the work that we do and what motivates us to do it, we want to introduce you to our team members over the coming newsletters.



## **Myriam Samba**

Deputy Technical  
Manager

I was born and raised in France, in the suburbs of Paris and graduated in 2008 with a master's degree in Chemical/Energy Engineering from "Centrale Lille"

I wanted to work in an industry that will, by supplying energy, impact people's everyday lives. This led me to join Total, a French energy company where I have spent 10 years working on the design, construction and operation of large-scale energy facilities in Russia, North Sea, Africa and the Middle-East.

Over the years, I have developed a strong interest in climate change challenges and particularly the need to explore cleaner sources of energy. This led me to take on e-learning courses, attend conferences on sustainable development, and volunteer for advising the NGO Energy 4 Impact that aims at installing solar panels in 300 off-grid clinics and schools in remote counties of Kenya.

In May I was excited to hear I was joining Blue Gem Wind to contribute to the development of floating offshore wind projects in the Welsh waters of the Celtic Sea. I really believe in the urgency of addressing climate change issues, and that renewable energies, especially offshore wind, will enable the vital transition to a low-carbon global economy.

In my current role I support the team coordinating the design, procurement and technical aspect of the consenting process to ensure that the project milestones are delivered. What is exciting about this job is that no two days are ever quite the same! It is a fast-paced environment where there are many different aspects to coordinate with stakeholders based in Wales, Cornwall, Ireland, Scotland, France, Germany and the USA.

The focus of the past few months have been on carrying out onshore and offshore surveys which includes a met ocean campaign. This allows us to assess seabed conditions and understand environmental constraints as well as measuring wind speeds and direction and wave height at the site, ultimately allowing us to design the floating wind farm. Having to overcome the challenges of Covid and weather downtime, it felt like a great achievement to see the floating LiDAR being deployed at the future Erebus site!

Floating Offshore Wind has an incredibly promising future and will play a vital role in the world's energy mix. I am looking forward to seeing the realisation of our work in 2027, with clean and affordable energy being supplied to thousands of homes in Wales.



# This month's featured team members

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**David Jones**

Stakeholder  
Manager

I grew up in a small seaside town in Wales called Barmouth. It was here where my passion for the ocean began, my father being a fisherman with my first ever job selling crab claws to tourists on the harbour! After a period of working overseas in the dive industry I completed a BSc in Coastal Zone Management and Marine Biology at Pembrokeshire College which prepared me for work at Pembrokeshire Coastal Forum where I spent 13 years working on coastal sustainability and marine energy. It was here where I discovered how our coast and seas mean so much, in so many different ways – providing food, transport, energy, tourism, health and wellbeing and a home to globally important species of marine life.

I joined Blue Gem Wind in May of this year and I'm genuinely excited about how floating offshore wind can make a real difference in mitigating climate change, creating new low carbon jobs for future generations and provide energy transition and supply chain opportunities. My role is varied and involves working with stakeholders from coastal communities to Government Ministers. I'm currently involved in working with ports in the Celtic Sea to explore how they can help support the project, trying to match their capabilities with the project requirements - is there enough dockyard space, deep water to bring the platforms in, can the quaysides support the weight of the turbines?

I've also been supporting colleagues to ensure there is political support for floating wind in Wales and the UK, working with supply chain companies to raise awareness of the opportunities that floating wind could bring and getting ready for our public exhibitions in November. At the same time trying to make sure coastal communities know about the project and feel they can ask questions and challenge us on issues that are important to them.

Overall it's a very rewarding job that's doesn't fit into a standard day! When not in the office I love diving with Neptune's Army of Rubbish Cleaners, surfing at Fresh West, walking the coast path and sailing around Skomer.

# Get Involved and Stay in Touch

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We want to connect with you at this early stage of the project and hope you will come along to our public consultation events in week commencing 16<sup>th</sup> November to hear more details about our plans and share your thoughts.

## Other ways for you to engage with us are:

### Our project website

[www.bluegemwind.com](http://www.bluegemwind.com)

### LinkedIn

[www.linkedin.com/company/blue-gem-wind](http://www.linkedin.com/company/blue-gem-wind)

### Twitter

[www.twitter.com/wind\\_gem](http://www.twitter.com/wind_gem)

### Email David, our stakeholder manager

[david.jones@bluegemwind.com](mailto:david.jones@bluegemwind.com)



Blue Gem Wind



[www.bluegemwind.com](http://www.bluegemwind.com)

