



**THE CROWN
ESTATE**

**Wales Review
2023/24**

Introduction



“Floating offshore wind has the potential to bring huge benefits to the economy and communities around the Celtic Sea, as well as supporting net zero and energy security.”

A discussion with Welsh Government and UK Government officials at Future Energy Wales in October



Croeso

Wales has led the way in harnessing the power of natural resources for energy. It is almost 100 years since the first hydroelectric power station was commissioned, and just over 20 years since the UK’s first offshore wind farm opened at North Hoyle off the coast of North Wales.

The recent launch of Offshore Wind Leasing Round 5 is helping to put Wales at the centre of cutting-edge renewable energy technology once again, with proposals for innovative, floating offshore wind farms in the Celtic Sea.

This has been a significant year for The Crown Estate. I have had the pleasure of visiting every corner of Wales as we work to deliver our strategy – meeting with partners and stakeholders, industry leaders, charities and conservation partners. We have deepened our connection with our elected members at a Westminster, Senedd and local authority level, seeking ways to work in partnership to respond to some of the most complex challenges of our time. We also share a common purpose with a growing network of local organisations and institutions, opening doors to interesting and exciting opportunities that are shared in this review.

Building a consensus around Round 5 and launching the tender process is undoubtedly our key achievement from the year, and has taken intense focus from our team. We have gathered input from a wide range of stakeholders and drawn on the experience and capabilities we have developed over four previous leasing rounds to maximise the potential benefits to businesses and communities around the Celtic Sea, while supporting national nature and net zero priorities.

I am grateful for the support we received from the then First Minister Mark Drakeford and the then Minister for Climate Change Julie James, who joined our Bidders Day in Swansea and advocated so passionately for the opportunity and the transformational change that floating offshore wind will deliver for Wales and the wider Celtic Sea community. This was a significant milestone in our journey and the cross-party political presence showed the breadth and strength of support we have felt over the last year.

Opportunities around the country

With Round 5 now out for tender, my top priority is to ensure that the potential benefits are felt as widely as possible. Critical survey work to derisk the projects is already under way, sailing from the ports in Swansea and Milford Haven, and this is just the beginning. The Celtic Sea Blueprint, a research report commissioned by The Crown Estate (and available to view on our website) states that this leasing round has the potential to create 5,300 jobs and generate a £1.4 billion boost for the UK economy – but we need to act now, building skills and supply-chain capabilities.

Our £50 million Supply Chain Accelerator is intended to help by match-funding projects with the potential to meet the requirements set out in the blueprint, from manufacturing to maintenance. The initial £10 million pilot funding round launched in June 2024 and I will continue to spread the word, speaking to enterprise leaders, chambers of commerce and business clubs across Wales about the opportunities in the Celtic Sea. Learn more about the Accelerator on page 11 and our website thecrownestate.co.uk/accelerator.

During my travels it has also been a pleasure to see how our investments are making a difference, with one highlight being the Morlais tidal energy demonstration project in Ynys Môn, which I visited with our Chief Executive, Dan Labbad, in February. We are building on our initial £1.2 million investment in this fantastic project, with a commitment to invest another £1.4 million over the next two years.

In March I was honoured to host the Crown Estate Commissioners and group leadership team in Pembrokeshire. This enabled them to see first hand the local challenges and opportunities, meeting with key stakeholders and community representatives who are integral to our work. As a former student of Pembrokeshire College, it was a particularly proud day for me to be able to introduce them to the fantastic work that the college is doing in working with industry to give today's learners the skills they need to build careers in tomorrow's green energy sector.

The Crown Estate also employs a number of alumni from the Bangor University School of Ocean Sciences, who do a great job of raising current students' awareness of careers in marine planning by attending careers fairs and conferences. The university contributes much-needed research around offshore energy, helping to establish Wales as a global leader in the sector (see page 8).



Dan Labbad, right, with Milford Haven Port CEO Tom Sawyer

Reflecting that pioneering status, we were delighted to be invited to attend WINDEXPO along with our port colleagues, sharing information about floating offshore wind with representatives of the Japanese renewables sector.

As explored on pages 8-9, we are also committed to supporting nature recovery. This is vitally important in Wales, where we have lost dozens of species already, with an estimated one in six under threat according to the State of Nature report, and we are keen to support the Welsh Government's consultation and ambitions on nature positivity. We are listening to feedback from our stakeholders and are considering carefully how to ensure that the assets we hold in Wales, both on land and on the seabed, are preserved in a way that protects and nurtures biodiversity. As an example, you can read about our oyster restoration work on page 9.

I hope this report will show how The Crown Estate is seeking to add value for Wales in every sense of the word. We are aware that there are strong views about our role, but our focus is on bringing our resources, skills and experience to bear on supporting the Welsh Government in our shared ambitions.

In the next year, I am very much looking forward to opening The Crown Estate's first office hub in Cardiff. This will signal the next phase in the delivery of some of the exciting projects outlined in the following pages.

Rebecca Williams

Cyfarwyddwr Cymru / Director Wales

Who we are

The Crown Estate owns and manages land on behalf of the nation, creating financial, environmental and social value, both for now and for the long term.

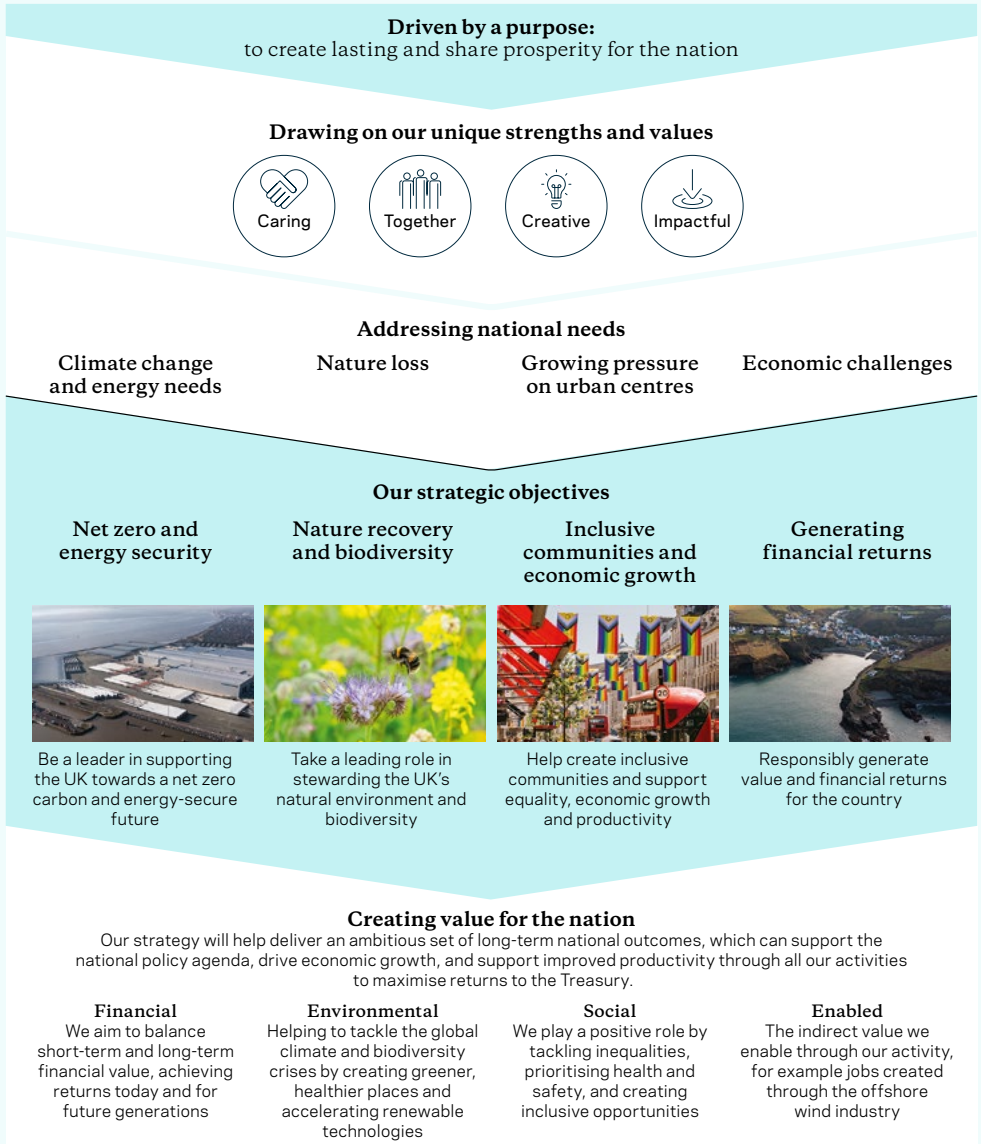
Our interests in Wales include renewable energy, which is our most significant activity, as well as oil and gas pipelines, marine aggregates extraction, telecommunications and power cables. We also manage around 65% of the foreshore and tidal riverbed, on which includes a number of ports. Inland, we are stewards of over 50,000 acres of common land, which is primarily rough pasture for grazing.

Through our strategy (see page 5), we aim to address national needs where we are best placed to draw on our unique combination of strengths and support economic growth and equality of outcomes. Set up by an Act of Parliament and occupying a space between the public and private sectors, we act independently and commercially to grow the value of the portfolio for future generations.



Our strategy

Through our strategy we seek to make a difference in addressing national needs, where we believe we can have an impact.



Net zero carbon and energy security

It has been 20 years since the UK's first offshore wind farm, became operational off the coast of North Wales, between Rhyl and Prestatyn. Leased as part of The Crown Estate's first offshore wind leasing round, North Hoyle became part of Wales's long and impressive history in renewable energy.

Today, we are seeking to begin a new chapter in that history by helping to develop next-generation technologies. The biggest milestone of the year in this regard was the launch of Offshore Wind Leasing Round 5, which will see the UK's first floating offshore wind farms built in the Celtic Sea.

More than 260 turbines are envisioned across the three Round 5 sites, each up to 300 metres tall (about three times the height of Wales' tallest building, The Meridian Tower in Swansea), and sitting on an anchored platform about the size of a football pitch. By putting wind turbines into deeper waters, where wind patterns are stronger and more reliable, these innovative projects have the potential to make offshore wind even more efficient, delivering up to 4.5GW of capacity – enough to power more than 4 million homes.

We have consulted extensively with stakeholders including the Welsh and UK governments, environmental NGOs, potential industry partners and the fishing community to ensure that the projects serve the needs of communities, businesses and nature. (Our Supply Chain Accelerator, explained on page 11, is an example of how we are doing this.)

Beyond offshore wind, we are supporting the Welsh Government's commitment to make Wales – whose climate and geography give it the second highest tidal range in the world – a world centre of emerging marine technologies.

Tidal power is another renewable energy source that presents significant opportunities for Wales, and we are working with Natural Resources Wales (NRW) to de-risk and accelerate tidal stream energy projects, aiming to use data from our Marine Data Exchange to help identify new locations and streamline the consenting process.

We are also engaging with a number of the successful project teams from the Welsh Government's Tidal Lagoon Challenge, which were announced at the Marine Energy Wales Conference in Swansea in March 2024.

Work at Gwynt y Môr wind farm in the Irish Sea





“Marine renewables are creating a once-in-a-lifetime opportunity for Welsh supply chains. The Crown Estate’s sector leadership is pivotal in securing the sustainable economic growth, jobs and skills that will radiate out from port hubs.”

Tom Sawyer

Chief Executive, Port of Milford Haven

The Morlais Project on Ynys Môn continues to go from strength to strength, with several Contracts for Difference awarded to its developers in the UK Government’s latest renewable energy leasing round. Run by the social enterprise Menter Môn and first leased by The Crown Estate in 2014, the Morlais site is helping to develop cutting-edge technology. With a maximum capacity of 240MW and a connection to the national grid, it’s the largest consented project of its kind in the world. Our long-term strategy and commitment to innovation has created an enduring partnership that has benefited the industry and local economy.

We hope that our commitment to invest a further £1.4 million in the Marine Characterisation Research Project over the next two years will help to develop this pioneering technology in a truly sustainable way that protects nature and benefits the community.

The potential for sustainable tidal energy in the Severn Estuary has been debated for many years, and we are supporting the independent commission established through the Western Gateway to investigate this possibility. The commission will explore a range of options including analysing the technology that is available, which areas would be appropriate and how environmental impacts can be minimised.

Innovation on a global stage

Floating offshore wind is a cutting-edge technology that is putting Wales on the map.

While attending various offshore wind and energy conferences this year, the team from The Crown Estate has been delighted to meet companies and delegations from around the globe expressing an interest in the opportunity in the Celtic Sea.

We have supported the Welsh Government in promoting Wales to the world by joining a panel discussion at the WindEurope conference in Bilbao in March as well as contributing to WINDEXPO, Japan’s largest wind energy trade show, in February.



Nature recovery and biodiversity

The natural world is in a depleted state, with the State of Nature report showing that one in six species in Wales is threatened with extinction. Earlier this year, the Welsh Government set out its intention of embedding environmental principles into Welsh law, setting biodiversity targets and taking proactive steps to restore nature.

The Crown Estate has a unique opportunity to contribute, through the assets we hold, from our common land to the seabed, and drawing on our knowledge, experience and partnerships.

After consulting widely with experts on nature and conservation, as well as representatives from a range of sectors including fishing, farming and the built environment, we have developed a strategy to help us maximise our impact. It commits us to:

- Understand nature
- Partner for nature
- Design for nature
- Fund nature

This is the approach behind our support for research at Bangor University, such as the ECOWind-ACCELERATE project (see box) and several relevant PhDs that are helping inform our data-led approach to nature recovery.

As we seek to deepen our impact we are partnering with organisations at a local and national level, including Natural Resources Wales (NRW). Our work with NRW includes a habitat-potential mapping project, through which we are seeking to identify priority areas for seagrass, saltmarsh and native oyster restoration.

The WWF and The Crown Estate have co-commissioned research on the Future Value of Seaweed Farming in the UK. This report is looking into the potential for seaweed-based products to replace agro-chemicals and plastic packaging, bringing opportunities for local economies and communities in Wales.

Groundbreaking research at Bangor

ECOWind-ACCELERATE is a research project looking into the impact of wind farms on the habitats and ecosystems that surround them. This information can be used to develop a more strategic approach to environmental monitoring for the future, with the ultimate aim of driving biodiversity gains.

Led by scientists at Bangor University, more than 30 researchers and scientists are working on the £2 million project, which we are helping to fund through our Offshore Wind Evidence and Change programme. Outputs so far include predictions of future seabed stresses in 2050 and in 2100 (accounting for climate change), and the sediments that can be moved in the wake of a wind turbine.

The researchers are also investigating how animals depend on seabed sediments for habitat, food and reproduction, and how top predators like seabirds depend on the abundance and behaviour of those animals for their food.



We are also designing for nature, for example by creating a Marine Delivery Routemap that uses data to plan how to meet the needs of people and nature into the future. Another project being funded through our Offshore Wind Evidence and Change (OWEC) programme is working to promote the coexistence of marine life on offshore wind cabling materials. By supporting wildlife such as coral, mussels and barnacles, it is hoped this initiative will leave the natural environment in a measurably better state.

Our investments in research and nature recovery initiatives such as the Marine Restoration Potential Project (which maps declining habitats such as kelp forests and maerl beds to give insight into how to restore them) are targeted where we think we can have the greatest impact.

We also recognise that the funding gap for nature needs to be addressed at a systemic level. We are therefore exploring the potential for high-integrity marine natural capital markets in the UK, and considering where we may be able to support large-scale outcomes by piloting financial structures, delivery mechanisms and partnership arrangements.



“The Crown Estate has provided both funding and practical support for the ECOWind-ACCELERATE project. We are now working collaboratively together to facilitate the acceleration and expansion of offshore wind, with sustainability and net gain biodiversity in mind.”

Katrien Van Landeghem,
Professor in Marine Geology, Bangor University



Restoring nature’s water filters

Oysters clean water by removing pollution, nitrates and particulates, and their reefs make homes for other marine life. The loss of native oyster populations – which have declined by 95% since the 1800s, due to coastal development, water pollution, historic overfishing and trawling – has therefore contributed to an overall decline in natural habitats. Meanwhile, the oyster fishing industry and the way of life it supported in our coastal communities has largely been lost.

To play our part in reversing this trend, The Crown Estate is supporting research and restoration work in Wales and around the UK. In Conwy Bay, we are working in partnership with the Wild Oyster project, unlocking seabed access so that they can release oyster “nurseries” into the sea.

Each nursery contains 27 mature oysters that will produce the next generation of larvae. Holding the oysters in close proximity together improves their chances of breeding successfully, restoring a self-sustaining oyster population to our seas.

Inclusive communities and economic growth

The push for a global transition to net zero by 2050 has the potential to drive significant growth at a local and national level, and we are working hard to make sure our activities in support of the environment also help businesses and communities to thrive.

These efforts align well with the vision set out by Welsh ministers in the Just Transition Framework consultation. Published in December 2023, this document imagines a future in which action on climate change has contributed positively to health outcomes, personal wellbeing, community cohesion and economic growth in Wales.

As we seek to contribute, we are guided by a set of social impact principles that commit us to address national needs, focus on place, listen to and involve communities, and collaborate for collective action. Through this approach, we have recognised that the interface between land and sea is particularly important to communities and industry in Wales, and we are seeking to use our position as custodians of the seabed to support both.

For the first time in a major offshore wind leasing round, we have included in the Round 5 tender process a number of contractual requirements for prospective developers to work with the surrounding communities. These specify that our customers must develop plans relating to jobs, skills, engagement and volunteering and we look forward to seeing how these will positively impact the communities around the Celtic Sea.

The extensive jobs and supply-chain requirements of Round 5 also have the potential to deliver significant benefits. We commissioned research to look at the supply chain requirements for the projects, which was published as the Celtic Sea Blueprint. It reported that manufacturing, transporting and assembling the windfarms could potentially create 5,300 jobs and create a £1.4 billion boost for the economy.

Sea Rangers

After running a bootcamp in Port Talbot during March, the Sea Ranger Service has now employed its first UK Sea Rangers.

The Crown Estate is supporting the Sea Rangers's first assignment to carry out wildlife monitoring in the Celtic Sea as part of a multi-year surveying programme in support of floating offshore wind developments from their base in Port Talbot.

Sea Rangers will undertake specific training from Crown Estate team members, who will join the crew on board and teach them best practices for observation, monitoring, recording and data processing.

When working out at sea, the Sea Rangers will be monitoring sea birds and other marine animals in the Celtic Sea.





“We are proud of the partnership that we have developed with the Crown Estate, which ultimately provides great benefit to the learner community of Pembrokeshire.”

Barry Walters,
Principal, Pembrokeshire College

The potential number of new jobs identified in the Celtic Sea Blueprint is also significant, and the need to invest in skills and talent has been highlighted as a key priority. The Crown Estate’s activities to support the development of the future workforce range from attending university career fairs to judging skills competitions for colleges across Wales. And we are working closely with Pembrokeshire College, which has shown leadership through projects like Destination Renewables, a pilot course focused on equipping students with the manufacturing and technical skills for careers in renewable energy; and the recently launched SPARC project, which focuses on attracting talented girls into STEM careers.

Survey work for Offshore Wind Leasing Round 5



Our Supply Chain Accelerator

To make floating offshore wind a success and ensure the benefits are shared, we need to build our domestic supply-chain capability.

While the UK has the world’s second largest offshore wind market, our offshore wind supply chain lags that of other European countries. Through a stakeholder engagement exercise, we learnt that one barrier that UK companies faced was an absence of early risk capital. To help address this issue, we have created a £50 million Supply Chain Accelerator to match-fund early-stage projects that link to the requirements of Round 5, as set out in the Celtic Sea Blueprint.

For the initial £10 million pilot funding round, which launched in June 2024, we are looking for UK projects that link to the requirements of Round 5.

Eligible projects could include factories, manufacturing plants, test facilities, or storage and distribution centres. The Accelerator will provide match-funding from £250,000 up to £1 million during the development phase, to cover activities like market research, business planning, surveys, feasibility studies and planning applications. For more information, see our website.



5,300

jobs in the Round 5 supply chain



£1.4 billion

boost for the UK economy



£50 million

total value of our Supply Chain Accelerator

2023/24 reports

Annual Report and Accounts
Wales review (Welsh and English)
Northern Ireland review
Sustainability Data Supplement
Environmental Reporting Criteria



Our Annual Report and Accounts 2023/24 and supplementary reports can be downloaded at:
thecrownestate.co.uk/annual-report

Photography credits

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Provence Grand Large windfarm, source:
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