

Offshore Wind Evidence + Change Programme

Unlocking the sustainable
development of the seabed in the UK

Annual report 2022



Offshore
Wind Evidence
+ Change
Programme

THE CROWN
ESTATE



HM Government

Foreword



Gus Jaspert
Managing Director, Marine

Welcome to our second annual Offshore Wind Evidence and Change Programme Report.

2023 is set to be another busy year for the UK's seabed, with exciting new opportunities for our world-leading offshore wind sector as well as continued momentum around newer technologies such as Carbon Capture, Usage and Storage (CCUS) and hydrogen. The multiple crises of climate, energy and biodiversity loss all need action now to transition to a more sustainable future. At The Crown Estate, we remain firmly committed to sustainably and responsibly managing the national asset of the seabed for its many users and the natural environment, alongside further unlocking its vast potential to support the country's transition to a secure and net zero energy future. And delivering on these vital areas can only happen through a robust evidence base, working collaboratively with partners from around the UK.

The Offshore Wind Evidence and Change Programme sits at the heart of broadening that evidence base and working together. Together with a range of expert partners, we are shaping and delivering projects across the nation to generate better insights and understanding that can support the long-term future of the marine environment and deliver better outcomes for all.

The success of the programme is down to strong partnerships, and I am grateful for all who are working together on this vital and shared journey to build our evidence to impact the future.

With a £50 million investment from us, the Offshore Wind Evidence and Change Programme is the latest step in our longstanding approach to the power of data and evidence. This is exemplified through our pioneering Marine Data Exchange, the world's largest database of offshore renewables survey data, research and evidence.

Inside these pages, we have sought to showcase a range of projects from across our programme. Partners have also shared highlights of what they're working on with us and why it's important.

The Crown Estate has set itself an ambitious and stretching purpose to 'create lasting and shared prosperity for the nation'. This programme is one of the best examples of how that purpose is being brought to life. I hope you enjoy reading this report and find it useful as we continue to shape the future of our extraordinary marine resources.

Reflections on a breakthrough year



Mandy King

Offshore Wind Evidence
and Change Programme
Lead

Our marine and coastal ecosystems provide us with life-supporting services - food production, climate regulation, carbon sequestration and clean water. However, increasingly, we now also look to these ecosystems to accommodate the expansion of marine energy infrastructure.

The events of the past year have placed energy security and offshore wind front and centre of the news agenda as the UK looks to increase its home-grown energy supplies, whilst also delivering nature positive solutions to enable recovery of these ecosystems. Against this geopolitical backdrop, plus climate and nature crises, the need for this programme and the UK-wide collaboration that underpins it is greater than ever.

Only by bringing together the varied organisations and diverse skills and interests on our Programme Steering Group can we deliver the long-term change needed to address this challenge. I am proud to be leading this programme and offer up a huge thank you to everyone who has played their part in making it such a success so far.

A commitment to further investment last year means that this is now a £50 million programme. It is incredibly heartening for me to see the programme expand, with more innovative data and evidence projects coming forward across the year. Looking ahead to the next 12 months, I'm excited to see it go from strength to strength as projects progress and we look to create genuine change for a lasting legacy.

The year hasn't been without its difficulties. We saw the worst ever outbreak of Avian Influenza exert devastating effects on seabird populations. The RSPB, one of our member organisations, is very much on the frontline and shared their experiences at our September Programme Steering Group meeting. We continue to support them in delivering an innovative seabird tracking project, despite these challenges. We are also collaborating with academic researchers, the ECOWind Champions and the offshore wind industry to optimise access to offshore wind farm sites as study areas. We're hosting an event in February to bring these groups together with a goal of ensuring that meaningful research can take place in an offshore wind farm in a safe and efficient manner.

I hope you'll enjoy reading the report, which gives a snapshot into the breadth of work underway, who's involved, what we've achieved so far and look forward to 2023.

2022 in numbers



£25 million

further committed, up to £50 million in total



15

new projects invested in throughout 2022, worth over £14 million



27

total projects now invested in across the programme, worth nearly £30m, including partner contributions of over £10m



3

pathfinder projects complete



2nd

major project call launched in September



3

new projects commenced (£1.4 million) and Intermediate Project Call concluded



3

Programme Steering Group meetings



27

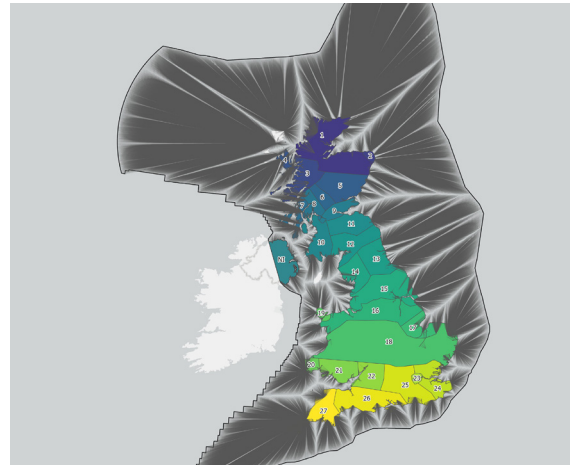
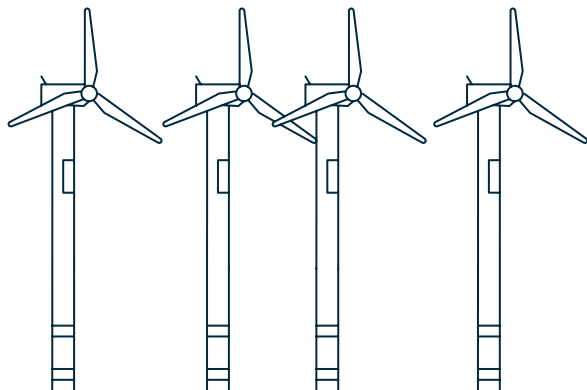
Programme Steering Group member organisations

Collaboration around the UK

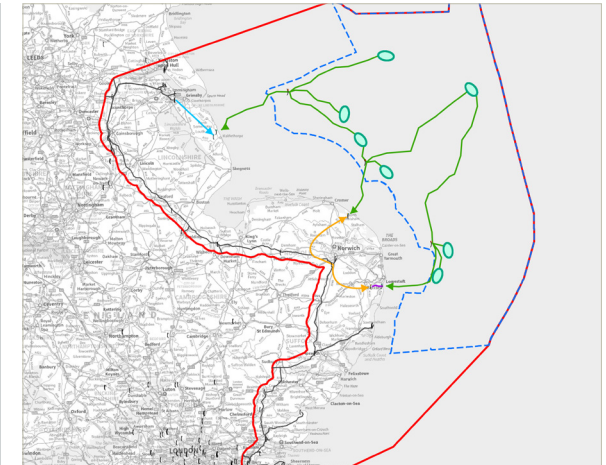
The projects funded by the Offshore Wind Evidence and Change Programme operate around the UK, exploring opportunities to support the sustainable potential of offshore wind development, alongside delivering long term gain for all marine users.

The following diagrams showcase how the Offshore Wind Evidence and Change Programme's projects are gathering data across the UK.

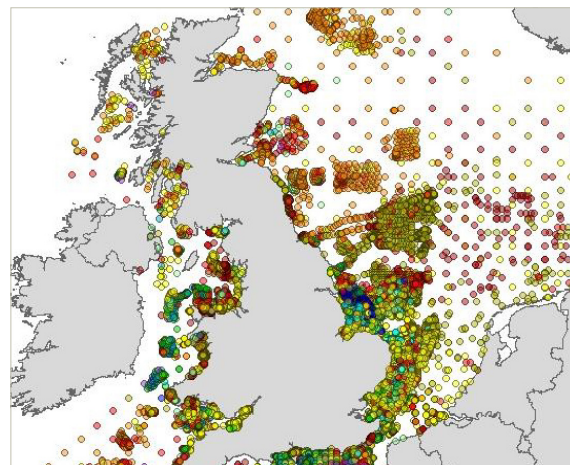
Findings from completed projects can be accessed on the [Marine Data Exchange here](#).



Source: Future Offshore Wind Scenarios (Net Zero)



Source: East Coast Grid Spatial Study



Source: North Sea Net Gain



Source: Strategic Targets for Net Gain (for Marine and Coastal Environments)

Collaborating for change

The need for offshore wind capacity to be increased has never been greater. By developing this in lockstep with the needs of all seabed users, we can accelerate the delivery of sustainable energy in a way which is sensitive to the importance of biodiversity in our marine environment.

As stewards of the seabed, The Crown Estate plays a unique role in bringing together varied stakeholder groups to deliver a blend of social, environmental, and economic value, helping create lasting and shared prosperity for the nation. The provision of high-quality data and evidence, which the Offshore Wind Evidence and Change Programme delivers, enables a holistic approach to the creation of vital infrastructure. This includes creating more opportunity for co-existence, simultaneously supporting the consenting process, protecting wildlife, and driving the recovery of the marine environment.

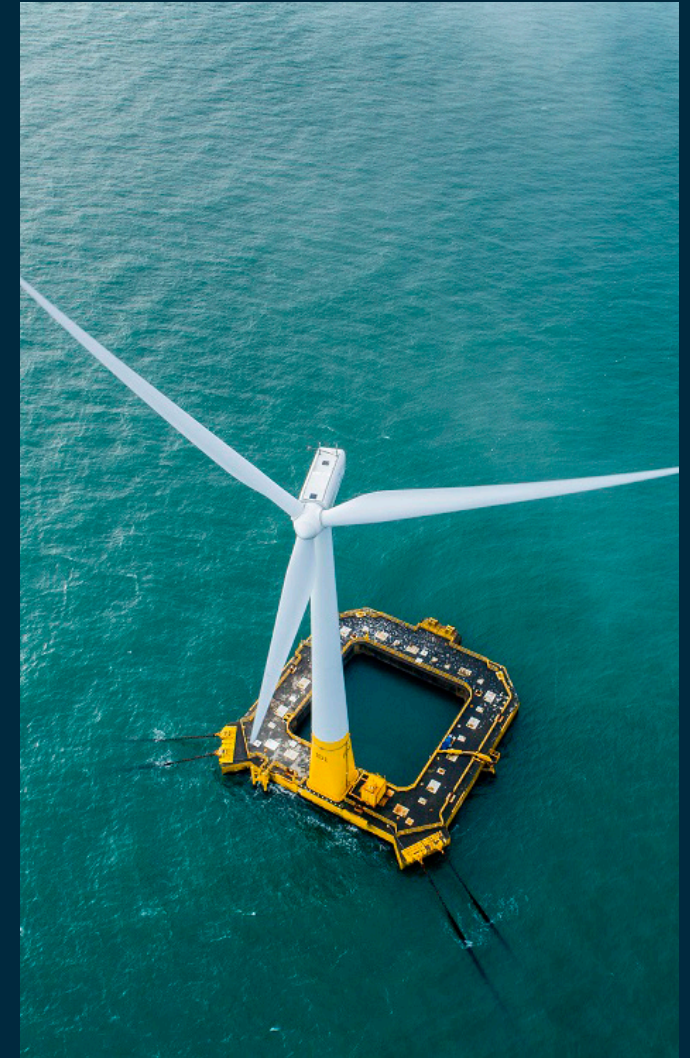
The programme is led by The Crown Estate, with the Department for Business, Energy, and Industrial Strategy (BEIS), and the Department for Environment, Food & Rural Affairs (Defra) as programme partners. Shaping and delivery of the programme is via a Steering Group made up of a range of organisations including Crown Estate Scotland, alongside governments from across the UK, their advisors and regulators, NGOs, and industry bodies, representing a wide range of seabed users and interests. Through

this collaboration we are delivering research and evidence projects across all four nations to grow the evidence base. By leveraging the expertise and broad specialisms of members the programme aims to ensure the full potential of the marine environment is realised while continuing to drive wider sustainability benefits.

Quarterly meetings give Steering Group members the opportunity to share information around important developments in their fields – for example, the impact of avian flu on seabirds, or the importance of strategic marine spatial planning. 2022 brought the opportunity of being able to host more members in-person, following a first year impacted by COVID-19.

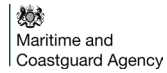
Over the course of 2022 we shifted the emphasis of our interactions with the Steering Group from start-up to assuring the delivery of outcomes and impact. Through collaboration, members have also been able to establish valuable ties – such as RenewableUK's Wind Energy Week, where we were invited to join a drop-in session, giving us an opportunity to discuss the programme with MPs. Working in collaboration with the Natural Environment Research Council (NERC), we were also able to reach the academic community through the [ECOWind programme](#).

Results from projects are publicly available on [The Crown Estate's Marine Data Exchange](#), the world's largest database of offshore renewables survey data, research, and evidence.



Programme Steering Group

The Programme Steering Group is made up of the following organisations.



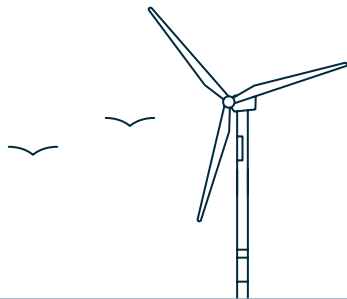
Projects

Continuing momentum

From fisheries to bird migration, through to cables on the seabed, in 2022 the programme has set in motion projects which help governments and the offshore wind industry deliver an increase in wind energy capacity, protect the UK's most important wildlife, and ensure biodiversity resilience for the long term. This year we closed out our intermediate project call and awarded multiple projects to the Centre for Environment, Fisheries and Aquatic Sciences (Cefas), focused on floating offshore wind, fisheries and the impact of cabling.

We also undertook a "lessons learned" exercise and collaborative gap analysis to make sure that we continue to do things better and make sure that our focus and needs case remains relevant, given wider changes in the policy landscape. This led to our 'Priorities for Investment 2022 Onwards' paper ahead of the second major project call launched in September, from which six outline project applications were accepted onto the programme.

Read the 'Priorities for Investment 2022 Onwards' paper [here](#).



A holistic programme

All projects invested in through the Offshore Wind Evidence and Change Programme support at least one of the following themes:



Enhancing biodiversity through a comprehensive evidence base



Optimising use of a busy seabed and supporting co-location



Enabling faster and more sustainable solutions through knowledge-sharing



Facing up to challenges collaboratively

The following section provides insights into some of the work carried out in 2022.



Enhancing biodiversity through the establishment of a comprehensive evidence base

Our understanding of how coastal wildlife can co-exist and thrive alongside other seabed users is developing all the time. One of the key priorities for the programme is to grow this knowledge base so that developing offshore wind capacity supports energy targets alongside biodiversity and wildlife targets. Many of these innovative projects are already underway and are adding to the bank of data and evidence that exists.



Enhancing biodiversity through the establishment of a comprehensive evidence base

ECOWind

In 2022 we committed funding to three ECOWind projects that work together to address knowledge gaps, and provide new evidence in support of marine policy and the sustainable management of offshore wind developments. ECOWind brings together experts from science, policy and industry to understand how offshore wind affects ecosystems, and the species and habitats that make them.

It is funded by the Offshore Wind Evidence and Change Programme and by the Natural Environment Research Council (NERC), and it is supported by Defra.

ECOWind-ACCELERATE

This project is focusing on the Eastern Irish Sea as a case study, is looking to better understand how offshore windfarm infrastructure alters conditions of the surrounding marine environment, from changing how water flows around turbine cables, to altering the location of fish preyed on by seabirds. By understanding the extent and implications of these changes, this project will support progress towards the Government's 25 Year Environment Plan. Upon completion, ECOWind-ACCELERATE will develop a public-facing tool to show the potential impacts of offshore wind developments on marine habitats in their region.

EcoWINGS

Uncertainty around impacts on seabird populations remains a key consenting issue for offshore wind development in the UK. The second project, EcoWINGS seeks to transform the existing evidence base regarding the cumulative impacts of offshore wind on key seabird species, and establish options for strategic compensation to ensure net gain for seabird populations and the wider marine ecosystem.

PELAgIO

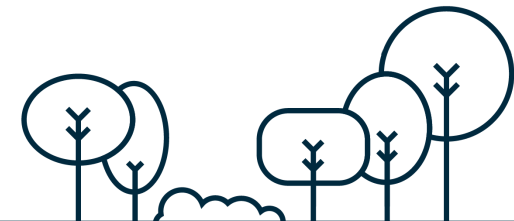
The third project funded, Physics-to-Ecosystem Level Assessment of Impacts of Offshore Windfarms (PELAgIO), will support the development of evidence-based policy and marine management through research that explores the consequences of offshore wind development on marine environments, marine wildlife, and wider ecosystem structures. Working from selected case study sites, the project outputs will be made scalable through the use of models to predict the impacts of these changes on the wider ecosystems, and the associated changes in their geographical distribution. This will look at effects at every level within the marine ecosystem, from changes to water movements and plankton growth, through to changing behaviours of marine prey and their predators.

Find out more about the projects [here](#).

“ OWEC is a vital contributor to ECOWind - an exciting research programme looking to understand the effects of offshore wind on ecosystems. Integral to achieving impact will be effective collaboration between experts from science, policy, and industry to ensure that ECOWind's research findings can be directly translated into progressive policy measures which positively impact both the climate and marine life. As the ECOWind Programme Champion, I work to facilitate these connections and join up activity across the ECOWind programme with key stakeholders. OWEC has been and will continue to be critical to supporting this key collaborative component of our work, by sharing access to their extensive networks and insights into this dynamic and ever-changing sector. ”



Professor Dickon Howell
ECOWind Champion



Enhancing biodiversity through the establishment of a comprehensive evidence base

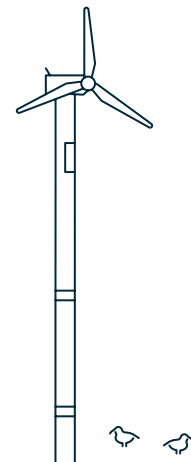
North Sea Net Gain

In 2022, we completed the North Sea Net Gain project. This project was an international collaboration to provide further evidence on how biodiversity on the seabed is distributed across the North Sea and around the UK into a central dataset. Through a thorough data mining process, detailed maps were produced of habitats and distributions of key benthic species in the North Sea, showcasing the power of “big data”.

In March 2022, the project launched, and as part of this part of this, two new online apps were produced in addition to the publication of the full dataset, which is helping ensure that decisions around offshore wind deployment can be made using the most comprehensive information available.

The Crown Estate led on the project in partnership with The Rich North Sea Programme, delivered through the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and the Flanders Marine Institute (VLIZ), and supported by the Project Advisory Group including Natural England and the Joint Nature Conservation Committee (JNCC).

Find out more about the projects [here](#).



“ A wealth of data collected by the offshore wind industry is now available through the Marine Data Exchange, and together with data from government and academic sources this enabled the project team to bring together almost 50,000 seabed samples to map benthic (seafloor) biodiversity across international boundaries.

This international collaboration has enhanced the flow of data between UK and European data repositories, paving the way for continued cross-border work to support sustainable development of offshore wind whilst delivering biodiversity net gain. ”



Isabelle Grieveson
The Crown Estate

Enhancing biodiversity through the establishment of a comprehensive evidence base

Predators and Prey Around Renewable Energy Developments (PrePARED)

Supporting the continued strength of biodiversity among seabirds and marine mammals is a key element in enabling offshore wind to be developed at pace and scale and meeting the UK's net zero targets.

Focused on case studies of the Moray Firth, and Firths of Forth and Tay regions of Scotland for data collection, the PrePARED project seeks to strengthen biodiversity by investigating how seabirds, marine mammals, and fish change their behaviour in response to offshore wind development. Greater understanding of how seabirds and marine mammals respond to these developments will help ensure offshore wind can be delivered in more locations whilst supporting local marine ecosystems. While studies are focused on sites in Scotland, the aim is for case studies to have broad relevance so that they can be applied across the whole of the UK.

This five-year project is being delivered by a project team led by the Scottish Government's Marine Scotland directorate, and comprises a wide range of environmental organisations and academic institutions.

Since the start of 2022, the project has:

- Collected fish-tagging data in the Moray Firth
- Conducted a broadscale fish survey in the Firth of Forth
- Carried Baited Remote Underwater Stereo-Video (BRUV) fish trap surveys in the Forth and Tay windfarms
- Deployed a Passive Acoustic Monitoring System array across 56 sites, to track marine mammals
- Met with partners at ECOWind to explore how best to work together to maximise findings and share lessons learnt across projects

With so much work underway, the project team is looking forward to sharing initial insights at their Annual Knowledge Exchange Meeting in Aberdeen this February. For ongoing updates, following the hashtag #PrePAREDproject on Twitter

To find out more about the project and its supporting organisations, visit the programme page [here](#).

“ The first year of PrePARED has come with a range of challenges that the team has worked hard to overcome. In tackling these issues, including recruitment and logistical alignment on access to offshore windfarms, we were helped by strong collaborations between project partners, and the wider Programme team. There were multiple project team meetings and work-focussed subgroup meetings to ensure effective project delivery, creating new synergies and partnerships within the team, thereby strengthening internal collaboration and the quality of project deliverables. Further challenges arose from the outbreak of avian flu, which hindered the monitoring of seabirds, and from problems associated with accessing sites owing to intense construction and development operations.

Despite all of the challenges, fieldwork began in April 2022 and continued successfully through the year. For the first time, we succeeded in collecting concurrent data on fish behaviour and distribution and harbour porpoise behaviour. We successfully collected baseline data to compare to the next two years of predator and prey behaviour and distribution observations in offshore windfarms under construction and operation. In terms of the project's overall goals, we have successfully collected empirical data on predators and prey in and around these sites that will help reduce consent risk and inform future planning of offshore wind development. ”



Dr. Bill Turrell
Marine Scotland

Optimising use of a busy seabed and supporting co-location

By thinking about all the different users of the seabed together, including the marine environment, there is an opportunity for development to deliver benefits beyond cleaner, more secure energy, including opportunities for co-existence where possible. A number of projects this year have sought to establish solutions and recommendations that will help ensure the ramping up of offshore wind capacity is delivered alongside broader benefits for all seabed users, ensuring that offshore wind is delivered in a way that complements marine activities across the whole seabed.



Optimising use of a busy seabed and supporting co-location

Linked projects led by Cefas

Drawing on an investment of £1.4 million from the Offshore Wind Evidence and Change Programme, four new projects are being led by Cefas. These projects vary in detail but share a common objective. They will gather valuable data and evidence that will help to find innovative ways to maximise energy and biodiversity benefits from the seabed and enable better understanding of how offshore wind affects the whole seabed and its users, helping the UK reach net zero in a way that delivers the most benefit for all marine users.

Nature Inclusive Cable Enhancement (NICE) Protection

This project is looking to make offshore wind infrastructure work purposefully for wildlife. When offshore cabling is laid, the protection surrounding the cable tends to be used by many species such as crabs, lobsters, fish, mussels and star fish. This project aims to purposefully encourage this coexistence of marine life on offshore wind cabling materials to support wildlife by delivering a biodiversity net gain.

Fisheries Sensitivity Mapping and Displacement Modelling

This project will support the thriving coexistence of fisheries and offshore wind. The project - Fisheries

Sensitivity Mapping and Displacement Modelling - originated from an initiative by Marine Scotland, the National Federation of Fisherman's Organisations (NFFO) and Scottish Fisherman's Federation (SFF) that sought to map how fishing activity has been displaced by the construction of offshore wind farms in Scotland. The investment from the Offshore Wind Evidence and Change Programme will allow Cefas to extend the project beyond Scotland to the rest of the UK, to build up a bank of data that protects the fishing industry from displacement.

Floating Offshore Wind

To reinforce the development and consenting of innovative floating offshore wind technologies, this project will model how floating offshore wind acts on the seabed and consider what physical changes result from tidal processes interacting with novel infrastructure. This aims to simplify Environmental Impact Assessments, streamlining the consenting process and contribute to net zero ambitions

Electromagnetic Fields Workshop

All electrical infrastructure carries small electromagnetic fields (EMF). The fourth Cefas project to receive funding from the Offshore Wind Evidence and Change Programme is an industry workshop which will consider how the assessment process of EMFs can be accelerated, by sharing EMF modelling techniques for offshore cabling.

“ During 2022 we have worked with the Offshore Wind Evidence and Change Programme to provide robust scientific evidence that supports offshore wind development, ensuring that the industry, the marine environment and local fishing communities are taken into account. The £1.4m being invested in four collaborative projects led by Cefas which will allow us to provide specific data and evidence. Project outputs will improve our understanding of how offshore wind developments can be undertaken in a way that supports a sustainable approach to developments in the UK marine environment.

Partnering and sharing knowledge amongst the evidence community will be critical in our efforts to achieve our strategic goals - and the integrated nature of the programme enables this. Well planned collaboration between project partners will be crucial to ensuring the UK continues to lead on the development of an optimal offshore wind sector. We look forward to providing further updates over the coming months, as we continue these key projects. ”



Professor Stuart Rogers
Cefas

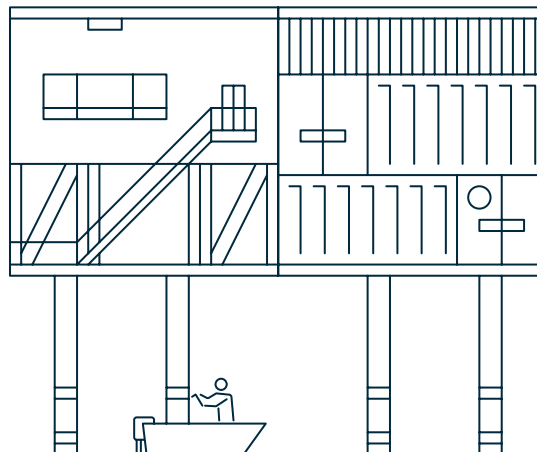
Optimising use of a busy seabed and supporting co-location

Planning Offshore Wind Strategic Environmental Impact Decisions (POSEIDON)

To ensure new wind farms are built in the most sustainable locations, it's important to have a full picture of what sensitivities might exist. The POSEIDON project, which began in January 2022, is conducting analysis to strengthen the knowledge base of the potential sensitivities of developing wind farms on different environmental receptors, such as seabirds, marine mammals, marine landscapes and benthic seabed habitats.

New and existing data on environmental elements will be combined using existing web-based tools where possible, to provide a comprehensive environmental baseline. These tools will be used by marine managers, scientists, developers and all those with an interest in offshore wind to ensure that decisions on marine planning and project development can consider environmental factors from the outset.

This collaborative UK-wide project is being led by Natural England, with support from an advisory group comprising Cefas, JNCC, the Marine Management Organisation, Natural Resources Wales, NatureScot and Bangor University.



“ Natural England is proud to be the lead partner for the multi-year OWEC-funded POSEIDON project. Through POSEIDON, we're leveraging the knowledge and expertise of industry, government and academia to develop new offshore wind planning tools and map environmental risk. These will help to realise our vision of a thriving marine and coastal environment alongside low impact offshore wind energy, tackling both the climate change and nature emergencies together.

During 2022 a cross-sector project team has collated data from industry, Environmental Non-Governmental Organisations and Statutory Nature Conservation Bodies and identified strategic gaps in the existing knowledge base. The first of two annual data collection campaigns are underway to address these gaps through the collection of new seabird, marine mammal and benthic data. We're collaborating closely with Celtic Sea Power, the Celtic Sea Pre-Consents Survey and the Defra led marine Natural Capital and Ecosystem Assessment programme to ensure maximum efficiencies and collective impact. We'll then be bringing together experts from different sectors to design new mapping and modelling tools to support policy-makers, authorities and developers to achieve sustainable offshore wind development alongside thriving marine nature. ”



Jonathan Burney
Natural England

Enabling faster and more sustainable solutions through knowledge sharing

Ensuring that processes that rely on the establishment of banks of data, such as Environmental Impact Assessment and Habitats Regulations Assessments, have data readily available is critical to drive high quality decision-making around the consenting process. It is therefore crucial that any pre-existing knowledge is shared in a manner that is accessible to all stakeholders working in the offshore wind industry. The programme is working to put in place schemes which enable more efficient and impactful processes for addressing these knowledge gaps.

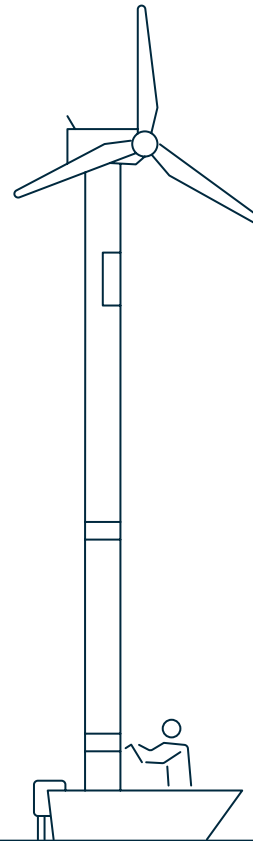


Enabling faster and more sustainable solutions through knowledge sharing

Offshore Wind Environmental Evidence Register (OWEER)

To ensure the Offshore Wind Evidence and Change Programme's strategic research projects are targeted where they are most effective in delivering benefit for the whole seabed, it is important that we understand where there are gaps in evidence and how these should be prioritised. The Offshore Wind Environmental Evidence Register (OWEER) built the first ever publicly accessible UK-wide register of evidence gaps and relevant research projects across four main areas - the seabed, marine mammals, fish and seabirds - to support the knowledge base for the continued sustainable development of new offshore wind farms. Since the first version of the OWEER was published in June 2021 there have been three further updates. Version 4 was published in January 2023 and is available via the Marine Data Exchange.

The project, which is being delivered by the Joint Nature Conservation Committee (JNCC), led by Defra, and funded by the Offshore Wind Evidence and Change Programme, continues to respond to industry needs, providing a valuable resource for a wide range of researchers and research institutions.



“ The Offshore Wind Evidence Change programme continues to bring together industry, government and experts in the field to help drive forward the government's ambition to accelerate offshore wind development while protecting our valuable marine environment. I am grateful for the work of this partnership over the past year, and look forward to continued collaboration to generate meaningful change and help us deliver net zero. ”



Rt Hon Lord Benyon
Biosecurity, Marine and
Rural Affairs Minister, Defra

Enabling faster and more sustainable solutions through knowledge sharing

Offshore Wind Evidence and Knowledge Hub (OWEKH)

Consenting for offshore windfarm projects can be a detailed and lengthy process. Information and data availability has the potential to increase the pace of development of offshore wind in a way that will support healthy seas, through a well-rounded and cross sector understanding of the spatial complexities of our marine environment.

All proposed offshore windfarms must undertake an Environmental Impact Assessment (EIA), considering all impacts of a development, including ecological and social. This produces ample data which is rarely stored in a central location for future developments to utilise and therefore accelerate their EIA and consenting process.

OWEKH will transform the information landscape for all developers, regulators, marine specialists, and other professionals operating in or interacting with offshore wind by designing and building an open online portal for practitioners to access offshore wind data and documents.

The project's discovery phase lasted from August - December 2022, in which it sought to collect essential insights on industry need for OWEKH through feedback forms and workshops. OWEKH is jointly steered by The Crown Estate, Defra, Offshore Wind Industry Council Pathways to Growth (OWIC P2G) and the Institute for Environment Management and Assessment (IEMA).



“ To those not familiar with the offshore wind farm consenting process, it may not be clear quite how vital this project is. However, developing a platform which supports the identification and development of sector specific evidence and guidance to ensure consistency and increase proportionality in the consenting process will save countless hours spent by developers and consultants drafting, and regulators and stakeholders reviewing, inconsistent documentation. The support the platform will offer to the Community of Practice for Offshore Wind will massively increase collaboration across the sector, becoming a key influence on the speed of expansion for offshore wind generation as we increase capacity to 50GW by the end of the decade.

I'm proud that The Crown Estate is playing an active role in delivering the outcomes for this industry shaping issue. Starting our discovery phase for this project in 2022 provided a launch pad to ensure that the unique benefits of the project can be fully achieved whilst avoiding duplication with other, existing workstreams. The discovery phase has informed an understanding in how information access should take shape, to ensure that offshore wind professionals at all levels can get rapid understanding of the available data, evidence, knowledge and guidance to drive high quality development decision-making within the consenting process. ”



Sion Roberts
The Crown Estate

Enabling faster and more sustainable solutions through knowledge sharing

Future Offshore Wind Scenarios

To meet the UK's ambitious objectives of achieving net zero by 2050, offshore wind deployment is set to increase from approximately 10GW of installed capacity in the last decade to up to 50GW by 2030, and potentially up to 140GW by 2050 according to the Climate Change Committee.

The study, completed in 2022, provides the first illustrative framework for how the UK could deploy sufficient offshore wind to meet net zero. It is not a marine spatial plan, rather, it provides illustrative spatial scenarios for offshore wind development out to 2050. These investigate the potential implications for future relative deployment costs and offshore wind technology choice, in interaction with the environment, other infrastructure, and marine industries such as shipping and fishing.

This UK-wide project assessed the different geographical areas that could potentially accommodate future offshore wind projects up to 2050 on this basis, and the different forms that development could take, for example using a fixed or floating wind farm design.

Future Offshore Wind Scenarios was led by the Department for Business, Energy & Industrial Strategy (BEIS), The Crown Estate and Crown Estate Scotland with consultancy support from Arup, ABPmer and the Offshore Renewable Energy Catapult; and advisory support from a wide range of stakeholders from across the offshore wind sector, other marine industries and environmental agencies. The project exemplifies the strength of collaborative research in informing policy direction, and the outputs of the project, which highlighted the need for whole-system planning and integrated marine spatial planning, continue to drive an enhanced understanding of the whole seabed.

[Find out more about the project here.](#)

“ Last year was a watershed 12 months for UK offshore wind, with records broken. This signalled a step change in the UK's ambition to deliver offshore wind, as set out in the British Energy Security Strategy.

The Offshore Wind Evidence and Change programme will help generate high-quality evidence and advice which will underpin measures set out in the Strategy. The programme will advance the UK's ambitions for net zero and the deployment of up to 50GW of offshore wind by 2030.

Here in the UK, we are pressing ahead more than ever in our efforts to improve Britain's energy security and transition to a clean, low-cost electricity system. I look forward to the Government's work on the OWEC programme as we deliver on these shared ambitions, while protecting the thriving biodiversity of our UK seas. ”



Rt Hon Graham Stuart MP
Energy and Climate Minister, BEIS

Approaching challenges collaboratively

From its unique collaboration with industry leaders, the Offshore Wind Evidence and Change Programme has a rare perspective on cross-cutting issues that the offshore wind industry and seabed users have been grappling with in 2022.

Powering healthy seas - RSPB

Launched in August 2022, the RSPB-led report – Powering Healthy Seas: Accelerating Nature Positive Offshore Wind – brought together NGOs and industry representatives to highlight a shared vision for healthy, resilient and sustainable seas.

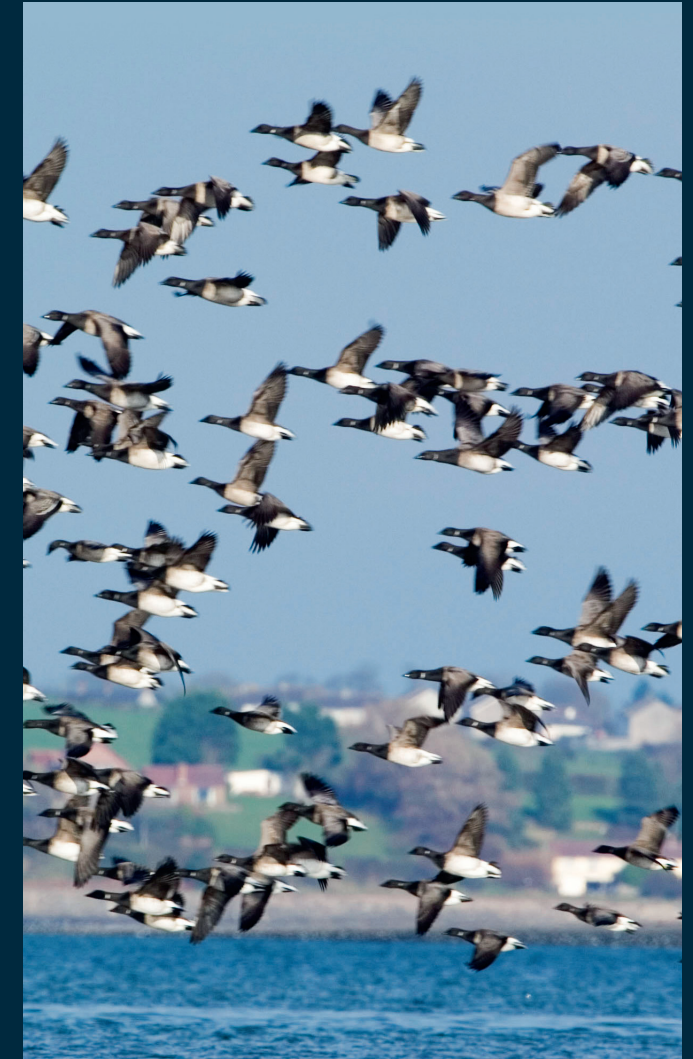
The report was presented to the Programme Steering Group in Autumn to share the recommendations for a Nature Positive approach to offshore wind expansion. It explores a two-pronged approach; first outlining how offshore wind needs to be expanded while minimising impacts on nature, and second how the ambition for expansion can be used as a catalyst for change, driving a Nature Positive approach.

Our seas are incredibly busy places, not only for marine activities and development, but our wildlife too. The report's recommendations and approach were supported by the Offshore Wind Evidence and Change Programme members demonstrating that collaboration is key as we accelerate the expansion of offshore wind, and ensure a just, Nature Positive energy transition.



Katie-Jo Luxton
Executive Director of
Global Conservation, RSPB

To find out more, read the report [here](#).



Driving value with data and evidence

The Offshore Wind Evidence and Change Programme has been created because at The Crown Estate, we understand that data and evidence will play a critical role in ensuring that the expansion of offshore wind and our transition to net zero is done in a sustainable fashion. However, while the projects invested in by the programme will be vital in providing this, it is also crucially important that findings are widely accessible to communities, academics, and other groups, so that they can be utilised to their fullest potential. Without a joined-up approach, this won't be possible. To help ensure this, The Crown Estate has committed to hosting data gathered across the programme on our Marine Data Exchange - the world's largest database of offshore renewables survey data, research, and evidence. Through doing so, we are able to provide universal access to findings that will provide value for stakeholders that go beyond just the 27 members of the Programme Steering Group.

This ensures that the vital collaborative work that is undertaken by partners on the Offshore Wind Evidence and Change Programme is publicly accessible to anyone interested - from researchers and community groups, to developers and environmental NGOs.

Once projects are complete, developers, regulators, marine specialists, and other professionals will be able to access data and documents, which will sit alongside more than 200 terabytes of data, all freely available. Access to this information will also help to accelerate in the consenting process as the sector accelerates development to meet net zero targets.

It is through holding these research outputs on the Marine Data Exchange that we can drive more value from our data across industry, and support the long-term future of the marine environment and deliver better outcomes for all.

You can access the Marine Data Exchange [here](#) and explore the vast data and evidence that The Crown Estate holds.



Chelsea Bradbury
Senior Marine Data and Evidence
Manager, The Crown Estate

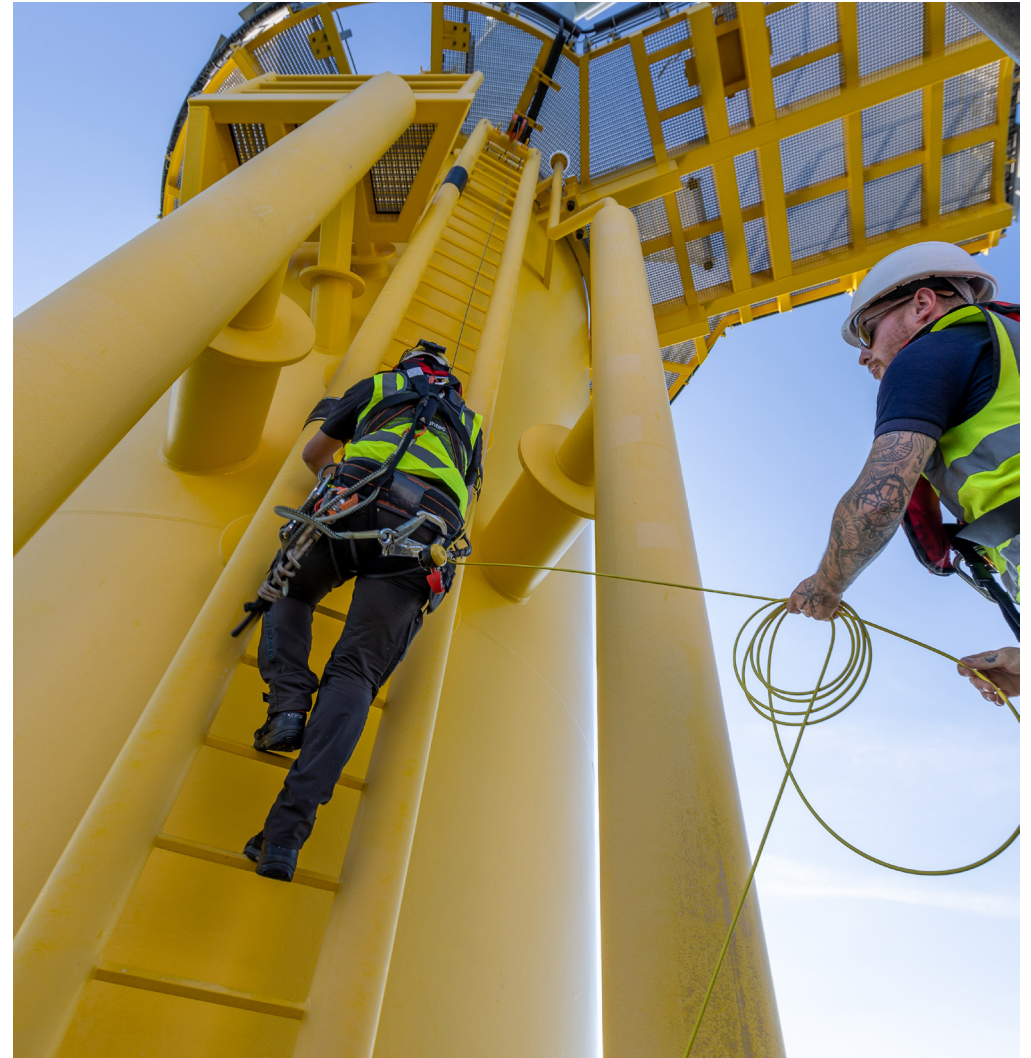


Continuing our progress in 2023

We're looking forward to continuing to invest in delivering for the whole seabed in 2023, seeing the outcomes of projects invested in and worked on with our partners. All of the projects funded are delivering the ambitions of the programme, including answering key priority areas such as understanding marine biodiversity net gain and how offshore wind can continue to grow co-existing with other sectors.

This year, we will be working closely with lead organisations from the Programme Steering Group to bring forward further project proposals from the 2022 main call to full bid stage, so they are ready to start in Summer 2023. We will also hold three PSG meetings to support the continued collaboration and engagement with the members. We expect to see multiple projects completed in 2023 and others start producing outputs of relevance to the offshore wind sector, including our ECOWind projects, the OWEER and Cefas-led projects.

In 2023, industry will continue work to meet national climate change targets of net zero emissions by 2050, 50GW of offshore wind and 5 GW of floating offshore wind capacity by 2030 and The Crown Estate will continue to sustainably develop seabed leasing opportunities accordingly in this context. We also look forward to launching at least one more main project call, and look forward to receiving submissions at this point. As we progress into the new year, we are sure that the Offshore Wind Evidence and Change Programme will continue to develop as a central pillar in supporting and reinforcing a thriving marine environment for the UK, acting as a catalyst for the transition to a more sustainable future.



Contact

Please explore the programme website at:

www.thecrownestate.co.uk/owec

Feedback is important to us. If you have any comments or enquiries, please email:

OWECenquiries@thecrownestate.co.uk

Findings of completed projects can be found on The Crown Estate's Marine Data Exchange at:

www.marinedataexchange.co.uk/content/info/offshore-wind-evidence-and-change-programme