

OWEC Projects Update

This dashboard contains updates since the 12 May PSG meeting for the following projects:

- Projects completed this quarter
- Main Call £500,000 - £5,000,000
- Intermediate Call £50,000 - £500,000
- Discretionary up to £50,000
- Pathfinder started before 2021

All projects fit the OWEC Programme Core Themes

Spatial co-ordination and co-location

To increase strategic coordination of different activities and interests in the seaspace and onshore, opening-up new opportunities for offshore wind through co-location and innovation allowing multi-use of space.

To improve the understanding of environmental impacts and benefits

Strategic research, evidence gathering and data sharing projects to: reduce impacts, uncertainty and risk, foster innovation, enabling more offshore wind to be deployed with confidence that impacts will not impede recovery of the environment and preservation of our cultural heritage.

To investigate the derogation process to unlock further offshore wind deployment

To investigate the availability and use of the Habitats Regulations Assessment (HRA) derogation process and Measures of Equivalent Environmental Benefit (MEEB) to help the consenting of offshore wind whilst maintaining the integrity of Marine Protected Areas – including alternatives and compensatory measures.

Delivery of net environmental gains

To investigate the delivery of net environmental gains to evidence and secure the benefits of deployment of offshore wind.

Core themes for the Programme



Projects completed (1 of 1)

Project	Purpose	Theme	Lead Org & Partners	Outcome / Impact
1. Cumulative Impact Assessment – releasing ornithological “headroom” between consented and “as built” offshore wind farm parameters	Obtain legal advice on how best to release unused ‘headroom’ - the difference in impact between estimated worst-case scenarios that consents are based on and the actual effects of as-built wind farm parameters (which are considered to be much reduced).	Improve understanding of environmental impacts and benefits	<p>Project Administration: The Crown Estate RenewableUK Natural England Crown Estate Scotland</p> <p>Plus Expert Stakeholder Group: UK Statutory Nature Conservation Bodies, Regulators, RSPB.</p>	<p>As a result of the project, text has been included within the Draft National Policy Statement for renewable energy infrastructure (EN-3) which aims to address several the report’s recommendations.</p> <p>The report and webinar are available on the Marine Data Exchange (MDE) and have seen high engagement. TCE will continue to monitor the impact of the report and look to engage with stakeholders in enabling progress against the recommendations arising from the project.</p>
2. East Coast Grid Spatial Study	To inform future policy choices on provision of offshore transmission infrastructure by providing greater evidence and a deeper understanding of the local environment and community impacts of connecting windfarms to the grid.	Spatial Co-ordination / Co-location	<p>The Crown Estate, in partnership with National Grid Electricity System Operator (ESO), National Grid Electricity Transmission and the Marine Management Organisation.</p> <p>AECOM has been appointed to provide consultancy services.</p>	<p>Summary report published on www.thecrownestate.co.uk/owec/</p> <p>Main report not being published but will be shared with BEIS, Ofgem and other key stakeholders to inform the Offshore Transmission Network Review (OTNR) and other policy initiatives.</p>



Main Call Projects (1 of 3)

Project	Purpose	Theme	Lead Org & Partners	Update
1. PrePARED Impacts of offshore windfarms on marine predators and prey	Aims to address how offshore wind farms impact the distributions and availability of prey of marine top predators (seabirds and marine mammals).	Spatial Co-ordination / Co-location	Marine Scotland Science	TCE have agreed to support, subject to the parties signing a Funding Agreement.
		Improve understanding of environmental impacts and benefit		
		Derogation Process		
		Net Environmental Gain		
2. Remote Tracking of Seabirds at Sea	Aims to reduce uncertainty around the population level impacts on seabird populations from offshore wind by providing empirical data using novel MOTUS technology.	Improve understanding of environmental impacts and benefit	RSPB	TCE have agreed to support, subject to the parties signing a Funding Agreement.
		Derogation Process		

Main Call Projects (2 of 3)

Project	Purpose	Theme	Lead Org & Partners	Update
3. The cumulative impact of offshore renewables on shipping and navigation	Aims to assess the cumulative effects of offshore wind on shipping patterns, safety of navigation, aids to navigation, commercial efficiency and the marine environment.	Spatial Co-ordination / Co-location	Trinity House and Maritime and Coastguard Agency	TCE have agreed to support, subject to further discussions and the parties signing a Funding Agreement.
		Improve understanding of environmental impacts and benefit		
4. Turbine impact on vessel navigation equipment	Aims to develop safety requirements for future maritime navigation and communication infrastructure to support growth of marine traffic in parallel with expansion of offshore wind.	Spatial Co-ordination / Co-location	Trinity House and Maritime and Coastguard Agency	TCE have agreed to support, subject to further discussions and the parties signing a Funding Agreement.
		Improve understanding of environmental impacts and benefit		

Main Call Projects (3 of 3)

Project	Purpose	Theme	Lead Org & Partners	Update
5. POSEIDON (Planning Offshore Wind Strategic Environmental Impact DecisiONs)	This project will improve the knowledge of environmental risks across UK waters and provide tools for future offshore wind planning. This will be achieved through producing a strategic environmental baseline for R4 lease areas, updating spatial models for key receptors and the development of a risk & opportunity map. This will be supported by additional, targeted, environmental data to complement data collected by developers	Spatial Co-ordination / Co-location	Natural England	TCE have agreed to support, subject to the parties signing a Funding Agreement.
		Improve understanding of environmental impacts and benefit		
		Derogation Process		
		Net Environmental Gain		



Pathfinder Projects (1 of 6)

Project	Purpose	Theme	Lead Org & Partners	Update
1. Offshore Wind Environmental Evidence Register (OWEER)	Assist in prioritising strategic research funding by building and maintaining a UK-wide and publicly available register of (a) prioritised strategic evidence gaps and (b) research projects relevant to reducing the environmental consenting risk to UK offshore wind developments.	Improve understanding of environmental impacts and benefits	Defra lead Delivery partner: Joint Nature Conservation Committee (JNCC)	First iteration released via the Marine Data Exchange (MDE) https://www.marinedataexchange.co.uk/details/3480/2021-jncc-offshore-wind-evidence-and-change-programme-offshore-wind-environmental-evidence-register OWEER forum planned for 24 September 2021.
2. North Sea Net Gain	An international data mining campaign to provide a baseline assessment of benthic biodiversity across the North Sea in order to identify opportunities for enhancement.	Net Environmental Gain	The Crown Estate has partnered with The Rich North Sea Programme (De Rijke Noordzee) Delivery partners: Centre for Environment, Fisheries and Aquaculture Science (Cefas) & Vliz (Flanders Marine Institute)	The data required for the project has been gathered, standardised and entered the OneBenthic database. Work on habitat modelling has been completed. The GIS team have produced 3D flyover video for project comms. Species distribution models are now in process for key benthic species and a draft version of the online app in which the data layers will be presented has been made.



Pathfinder Projects (2 of 6)

Project	Purpose	Theme	Lead Org & Partners	Update
3. Air Defence Mitigation Concept Demonstration trials	To test a series of concepts and technologies to mitigate air defence radar issues with wind turbines and identify solutions which could allow offshore windfarms to be built in areas where deployment has previously been blocked due to impacts on MOD air defence radar	Spatial Co-ordination / Co-location	MOD and Offshore Wind Industry Council (OWIC) members: TCE, Equinor, Orsted, RWE Renewables, ScottishPower Renewables, SSE Renewables, Vattenfall Wind Power and the Aviation Investment Fund Company Limited.	Flight trials of potential new solutions to mitigate impact of wind farms on air defence radar have taken place this summer. The results of the trials will be analysed by MOD and will feed into a Strategy and Implementation Plan for delivery of radar mitigation due at the end of September 2021.
4. Future Offshore Wind Scenarios	A UK-wide study to develop and examine spatial scenarios, to better understand the opportunities for future offshore wind deployment. Includes the key drivers of costs and how these relate to increased offshore wind deployment under different scenarios, including floating offshore wind.	Spatial Co-ordination / Co-location	BEIS in partnership with The Crown Estate and Crown Estate Scotland	Project kicked off mid-February and produced Net Zero pathways (Base case of 65GW, Balanced of 95GW and high ambition of 140GW). Current planned delivery is Oct-21. Dashboard requirements gathered. TCE Digital are providing access to our Azure environment to begin building the tool



Pathfinder Projects (3 of 6)

Project	Purpose	Theme	Lead Org & Partners	Update
5. Seabird Sensitivity Mapping Tool - Update	A user-friendly tool to estimate the sensitivities of seabird species to Offshore Wind Farms in UK waters, with spatially explicit risk estimates for all at sea locations. The previous tool (ORJIP Phase 1) was for Scotland only. It is proposed to roll this out to the rest of the UK and update functionality and usability.	Improve understanding of environmental impacts and benefits	Marine Scotland (as part of the ScotMER programme) With: The Crown Estate and The Carbon Trust – on behalf of ORJIP Lead contractor UK Centre for Ecology & Hydrology (UKCEH)	Tripartite Funding Agreement between MS, TCE and CT finalised and signed. Project underway and first few project SG meetings have been held.
6. North Sea Prehistory framework Revision	Ensure all relevant archaeological work conducted for the Offshore Wind sector contributes to understanding and protection of North Sea Prehistory by supporting clear and agreed research priorities	Improve understanding of environmental (cultural heritage) impacts and benefits	Historic England (HE) and The Crown Estate. Project contractor TBC	Project approved, with TCE and HE as joint partners. Procurement exercise completed with preferred supplier identified. Currently in process of agreeing funding MoU with HE and contract with supplier, with project to commence in coming weeks.



Pathfinder Projects (4 of 6)

Project	Purpose	Theme	Lead Org & Partners	Update
7. Ecological Consequences of Offshore Wind (EcoWind)	To leverage the wealth of scientific expertise within the UK Research and Innovation (UKRI) community to develop new evidence and approaches to support the objectives of the Offshore Wind Evidence and Change Programme.	Improve understanding of environmental impacts and benefits	Natural Environmental Research Council (NERC) lead with The Crown Estate and Defra as partners.	MoU signed between TCE and NERC. Programme launched in August 2021.
	This is a new partnership programme that will supplement and be co-ordinated with calls for projects to this Programme Steering Group.	Net Environmental Gain		
8. Offshore Wind Knowledge and Evidence Hub	To support more proportionate Environmental Impact Assessment (EIA) and in future link into digital EIA by bringing together the wealth of knowledge and evidence that informs such assessments.	Improve understanding of environmental impacts and benefits	The Crown Estate with the Institute of Environmental Management and Assessment (IEMA)	Progress is continuing towards seeking a contractor to undertake the works, with an RFI expected to be announced shortly. General stakeholder engagement is ongoing to raise the profile of the project, and ensure avoidance of duplication.



Pathfinder Projects (5 of 6)

Project	Purpose	Theme	Lead Org & Partners	Update
9. Red Throated Diver - Tagging Study	To assess how the presence of offshore wind farms affects the behaviour (energetics) of this species of bird. The outputs from the study will help inform future decisions on the acceptability of offshore wind farms where these birds might be affected.	Improve understanding of environmental impacts and benefits	JNCC	Currently in final project year with retrieval of final tags going ahead over coming months, leading to final reporting.
10. Red Throated Diver - Aerial Surveys	Greater Wash Special Protection Area (SPA) overwintering red throated diver distribution surveys.	Improve understanding of environmental impacts and benefits	Natural England	Aerial surveys to commence in the 2021/22 wintering season.

Pathfinder Projects (6 of 6)

Project	Purpose	Theme	Lead Org & Partners	Update
12. UK-wide extension of stochastic collision risk modelling (SCRM) tool.	This is a UK-wide roll out of an existing Scottish SCRM tool to cover relevant bird species that migrate through English, Welsh & NI waters	Improve understanding of environmental impacts and benefits	Scottish Government, Natural England and Natural Resources Wales	Project approved and proposal accepted. TCE, NE NRW have joined project SG and work commenced on UK wide scope items.
12. Mapping Fish and Fisheries Evidence Gaps – UK-wide	To inform the direction of future fish and fisheries research in the context of offshore wind development through a literature review and consultation to identify the key evidence gaps.	Improve understanding of environmental impacts and benefits	Marine Scotland (as part of the ScotMER programme) in partnership with The Crown Estate. Delivery Partner: Brown and May	Project report and webinar to be published in October 2021.

Discretionary Projects (1 of 2)

Project	Purpose	Theme	Lead Org & Partners	Update
1. Strategic Targets for Net Gain in the Coastal and Marine Environments	To identify and agree clear strategic targets for the improvement and restoration of the marine environment which are used as a basis for determining net gain for the industry and other marine industry sectors	Net Environmental Gain	SUDG in collaboration with The Wildlife Trusts (TWT) Delivery partner: ABPMer	The Task and Finish Group (T&F Group) reviewed draft gap analysis and preliminary analysis of first survey responses and provided feedback to ABPMer - awaiting final version of documents. Second survey went live 27 August. Comms and engagement protocol documents provided to ABPMer. On track to complete project at end of September.
2. Benthic Compensation	To address the current gap in understanding around suitable benthic compensation measures and their deliverability for offshore wind development.	Derogation Process	Natural England (NE)	Funding has been approved and an initial meeting held with Natural England. Project specification is will be undertaken prior finalising the funding agreement.



Discretionary Projects (2 of 2)

Project	Purpose	Theme	Lead Org & Partners	Update
3. Floating Offshore Wind and Fisheries – virtual windfarm planning	To enable evidence supported dialogue and knowledge sharing with the aim of improving the planning process and development of offshore wind through greater co-operation and mutual understanding of sector needs of the fishing industry and the offshore wind sector	Spatial Co-ordination / Co-location	<u>National Federation of Fisherman's Organisations (NFFO)</u>	Approved August 2021.

Intermediate Call Projects (1 of 2)

Project	Purpose	Theme	Lead Org & Partners	Status
1. NICE Nature Inclusive Cable Enhancement (InnoNID)	Aims to review existing cable protection technologies and explore different innovative Nature Inclusive Design (NID) solutions. Other methods are employed for different seabed types; however, this project focuses on where hard substrate is needed for cable protection and maximizing NID principles for when hard substrate is the only option.	Spatial Co-ordination / Co-location	Cefas, ARC Marine Ltd, DEME Group	Accepted onto the programme in August 2021
		Improve understanding of environmental impacts and benefits		
		Net Environmental Gain		
2. NRW Characterising the Irish and Celtic Seas: A comparison exercise with the North Sea	To help inform how noise abatement technologies can be expected to perform with the North Sea and any potential modifications needed; Identify how these differences may affect noise propagation models used for EIAs, while quantifying key parameters; Identify how these differences could affect key receptor species (fish, mammals, invertebrates)	Improve understanding of environmental impacts and benefits	Cyfoeth Naturiol Cymru / Natural Resources Wales (NRW)	Accepted onto the programme in August 2021

Intermediate Call Projects (2 of 2)

Project	Purpose	Theme	Lead Org & Partners	Status
3. Fisheries sensitivity mapping and displacement modelling (FiSMaDiM)	The project will identify areas of high and low risk of OWF development causing negative economic impacts on fishing industry and help to reduce the likelihood of conflicts between these two economic activities. A web-based tool will be created to incorporate to explain current fishing activity potential economic impacts of OWF sites on the fishing sector.	Spatial Co-ordination / Co-location Improve understanding of environmental impacts and benefit	Lead org: CEFAS; Partners: St. Andrews University; Marine Scotland Science; Marine Management Organisation	Accepted onto the programme in August 2021
4. Reducing uncertainty of multiple stressors within OWF EIAs for floating offshore wind	The overall purpose of the programme of works is to support future transition to floating offshore wind technology the UK's low carbon energy transition ambition. The projects will aim to improve our knowledge of environmental risks across UK Waters, and to provide tools for future offshore wind planning.	Improve understanding of environmental impacts and benefit	CEFAS	Accepted onto the programme in August 2021