



Swansea Bay City Region Joint Committee - 28 July 2022

Pembroke Dock Marine Update

Purpose:	To inform Joint Committee of the progress made and status of the SBCD Pembroke Dock Marine Programme
Policy Framework:	Swansea Bay City Deal Region Joint Committee Agreement
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For Information	

1. Introduction

1.1 The Pembroke Dock Marine (PDM) Business Case identified its purpose as:

“Pembroke Dock Marine (PDM) will create terrestrial and marine assets combined with research, development and innovation support to establish a world-class centre for marine engineering with an immediate focus on low carbon energy, and wider application across the blue economic sectors (such as ship building, aquaculture, oil and gas, and nuclear) creating additional economic growth and the strongest possible project resilience.

1.2 Project resilience and longevity has remained at the centre of PDM’s development. It originated as a delivery base for the wave and tidal sector (a sector predicted to have a global value of £76bn by 2050¹) but early on identified the need to remain flexible and to create spaces and facilities that can be used cross-sector to drive innovation and operational efficiency. As the FBC has developed, the floating offshore wind opportunity has come to the forefront presenting a significant immediate manufacturing opportunity for UK industry – with a key opportunity off the Welsh coastline. It is a larger market with more immediate opportunity with the Crown Estate

¹ Ocean Energy Forum (2016). Ocean Energy Strategic Roadmap 2016, building ocean energy for Europe

estimating a UK GVA contribution of £33.6bn and an annual UK export value of at least £550m by 2050² - and also has opportunities for co-location with the wave and tide industries.

- 1.3 Since the early drafts of the FBC, climate emergency declarations have been made internationally, including by UK and Welsh Governments with a focus on reaching net zero emissions by 2050. Public money will play a key role in creating the infrastructure needed to reach such targets. Pembroke Dock Marine provides the support structure for the growth of an industry that targets the generation of decarbonised energy (and an associated export industry) therefore aligning with climate emergency goals and validating the use of public money.
- 1.4 PDM is expected to create in excess of 1,800 jobs and have positive impact on creating supply chain resilience protecting more jobs. While the project does anticipate labour migration into the region (as many developers will bring their businesses with them) it will also create significant opportunities for rewarding careers and skills expansion for the current local labour market and the next generation. The majority of jobs are expected to be high skill and year-round, which will help strengthen the region's annual productivity that is currently overly reliant on seasonal employment and a reducing oil and gas industry. It will create links between academia and industry to drive innovation and deliver a centre of engineering excellence.
- 1.5 It is being delivered in an economically deprived coastal community, far removed from London's economic hub and in a region heavily reliant on economic support from the EU. With that support about to be removed, Pembrokeshire needs to become more sufficient in order to not be a drain on the UK's economy. The creation of high-skill employment will help boost the region's economic growth and stem Pembrokeshire's extensive outward migration while attracting inward migration. This will have a positive impact on the local economy and higher residency numbers will support reduced per person costs for Local Authority provision of services. PDM will positively influence social cohesion and mental well-being for this and future generations. It is also being delivered adjacent to town infrastructure in an existing industrial area resulting in minimal community disruption.
- 1.6 Swansea Bay City Deal funding will leave a significant legacy in Pembrokeshire. It will build the home of a new industry reskilling a new generation and revitalising an economically disadvantaged region. Net Zero provides the region with significant challenges and opportunities. The Pembrokeshire economy will have to transition from the current oil and gas sector to a low carbon future whilst retaining high value jobs. Pembroke Dock Marine will play a crucial role in this transition delivering innovation, resilience, diversification and ultimately drive down costs in the Blue Economy.
- 1.7 Pembroke Dock Marine is seeking £28m of funding from the Swansea Bay City Deal (£2.45m from UK Govt and £25.55m from Welsh Government) to deliver a £60.4m project within 5 years of approval. This will leverage immediate match funding of £16.8m of European funding, and private sector investment of £13.5m. In addition, it will leverage inward investment estimated to be in the region of £60m private/public funds from technology developers (IO 2). Releasing £410 million in longer term inward investment (IOs 8 & 9), and £73.5 million annual GVA. All investment is dependent on securing the Swansea Bay City Deal funding.

² Macroeconomic Benefits of Floating Offshore Wind in the UK, Crown Estate and ORE Catapult, Sept 2018

1.8 The project and its economic, climate and regeneration benefits are in danger of being lost to the region, Wales and the UK. Each partner has been investing at risk and can no longer face delays in the decision process.”

2. Pembroke Dock Marine Status

2.1 Business Case





- Pembroke Dock Marine was identified as a potential Swansea Bay City Deal project in 2016.
- The business case was developed by the four partners: Marine Energy Wales, Port of Milford Haven, Offshore Renewable Energy Catapult and Celtic Sea Power (formerly Wave Hub Development Ltd).

2.2 Governance

- Collaboration agreement approved 23 September 2021.
- A Programme Board has been established.

2.3 Funding

- The formal funding agreement was signed 2 July 2021.
- Pembroke Dock Marine’s funding allocation is £60.47M., of which £28 million is from Swansea Bay City Deal

Element:	Marine Energy Engineering Centre of Excellence	Pembroke Dock Infrastructure	Marine Energy Test Area	Pembrokeshire Demonstration Zone	Combined outputs
Delivered by:					Pembroke Dock Marine Consortium
Headline Deliverable:	Establish the Marine Energy Engineering Centre of Excellence for research and innovation.	Reshape the physical infrastructure of Pembroke Port, Gate 4, to ensure maximum operational efficiencies for UK industry.	Create pre-consented and licensed zones within the Milford Haven Waterway for component and scaled device testing.	Deliver Phase 2: the consents and Securing of Grid for the 180MW Pembrokeshire Demonstration Zone targeting both wave and floating wind technologies.	Globally marketable proposition covering cradle to grave solutions for 21st century marine engineering and marine renewable needs
Total SBCD	£4m	£21.55m	£0.78m	£1.67m	£28m
Full Cost	£11.18m	£41.59m	£2.68m	£5.02m	£60. 47m
% Capital Spend	14.9%	100%	15.7%	0% ³	72.2%

The following additional funding, as outlined in the Business Plan, was secured:

ORE Catapult:

To establish the Marine Energy Engineering Centre of Excellence for research and innovation (Marine Energy Engineering centre of Excellence, MEECE):

- £5m WEFO SO 1.2 Research and Innovation

³ Wave Hub Ltd are proposing to capitalise all PDZ Phase 2 expenditure at the FID for Phase 3 Construction estimated for completion in 2024- 2025 outside of the SBCD funding phase. Therefore, spend is classified as Revenue for this FBC

- £1.04m ORE Catapult
- £0.74 Academia
- £0.4m Other

Port of Milford Haven:

To reshape the physical infrastructure of Pembroke Port, Gate 4, to ensure maximum operational efficiencies

- £13.046m Port of Milford Haven
- £6m WEFO 3.1. Marine Energy
- £1m WEFO SO 4.4. Connectivity and Urban Development

Marine Energy Wales:

To create pre-consented and licensed zones within the Milford Haven Waterway for component and scaled device testing (Marine Energy Test Area, META)

- £1.19m WEFO SO 3.1 Marine Energy
- £400k WEFO's targeted match funding
- £0.3m Coastal Communities Fund

Celtic Sea Power:

To deliver the consenting for the Pembrokeshire Demonstration Zone for the testing of full-scale arrays for both wave and floating wind technologies.

- £3.162m WEFO 3.1. Marine Energy
- £132k Wave Hub Development Ltd
- £60k Welsh Government grant

Ongoing engagement with WEFO to obtain additional financial support due to increased costs resulting from inflation/commodities increases and availability.

3. Pembroke Dock Marine Delivery Summary

3.1 Over-arching activity in 2021

- Partners attended SBCD portfolio showcase 3rd March
- Partners attended MEW conference in Llandudno in March
- IOD briefing on SBCD and PDM at Milford Haven 26th May

3.2 Partner specific activity in 2021

ORE Catapult, MEECE:

- Approval of the PCC Planning reserved matters and discharge conditions for Phase 1 received.
- Marine license variation for workboat pontoons approved/issued by NRW
- Standard Variation Letter has been signed by all Partners.
- Collaboration agreement has been signed by all university partners and ORE Catapult.
- New office opening at MSparc, North Wales
- Research Engineer has been recruited and joined the team MEECE marine buoy installed with and began testing a research project
 - New innovation manager starting
 - Attended MEW conference, delivering meet the expert session

Port of Milford Haven, PDI:

- Approval of the PCC Planning reserved matters and discharge conditions for Phase 1 received.
- Marine license variation for workboat pontoons approved/issued by NRW
- Planning Reserved matters approved, and Marine licence variations issued by EA
- Workboat pontoons design complete
- Hangars:
 - CGIs complete
 - Annex 4: Concrete repairs complete, render removed, existing wall ties replaced, foundations dug for link building, containment and cable run complete (but not live); New roof complete, footings and concrete pour for foundations complete in readiness for new link building, 1st Fix M & E, and dry lining all underway.
 - Annex 3: New openings internally complete; New roof complete, Concrete repairs complete, External underpinning completed
 - Annex 2: Soft strip complete and ready for roof demolition
 - Annex 1: Switchgear redesign complete, WPD engaged
- Surface water drainage complete across site ready to create new outlet.
- Lot 1: Agreed terms for Lot 1 ECC Contract with Main Contractor, Main Contractor ECC Contract issued for workboat pontoons/pickling pond infill and demolition works. SAB Approval received
- Lot 2A: 100% "For Construction" design issued for pricing. Both applications for the Phase 2a Reserved Matters application and the Phase 2a Discharge of Conditions application have now been submitted.

Marine Energy Wales, META:

- Successful recovery of SELKIE turbulence testing tool developed by Swansea University
- Marine Licence Variation application submitted to NRW
- Business Development Services contracted to support project
- Attend, exhibit and present at Marine Energy Wales Conference
- Town and Country Planning consents for site improvements permitted
- MEECE marine buoy installed at Dale Roads test site

Celtic Sea Power, PDZ:

- Legal and Grid technical Support Procurements concluded
- Environmental Support Procurement Live
- Pre-Application for grid submitted and engagement with NGrid, and other key OTNR Stakeholders underway.
- Team will be increasing to 4 as of 1st June, 5th role being advertised
- Environmental Scoping and Technical Procurement Awarded.
- CSP Hosted FLOW summit in Exeter April 27th

4. Pembroke Dock Marine Risks

Risks and Issues

- Redesign work underway for slipway to address increasing costs due to inflation/commodities increases and availability
- Capital cost increase PDI project budget. Further phases are at different stages in the PDI development plan but MHPA continue to work to inform options to mitigate (IP1)
- Ensuring appropriate level of project and program governance / reporting is established to maintain the projects value to the SBCD whilst ensuring the project remains delivery and impact focused.

- PDI Lot 1 ECI design stage prolongation will result in delayed start to Lot 1 Slipway/workboat pontoons and extended completion dates (Jan 2024) Ongoing material costs increases presenting a risk to deliver IP1 to budget.
- Due to the issue raised around redesign work for slipway (noted below) there is a risk this may impact completion date – currently Dec 2023
- PDI Lot 1 Construction Programme end date (see below)
- Floating Offshore Wind requirements presenting significant opportunity but further intervention in transmission infrastructure and multiple regional ports needed in order to connect the projects to the UK energy system & compete with European ports to capture benefit.
- Mitigations – Ongoing dialogue with contract partners and funding bodies. Early collaboration discussions with Regional Ports ongoing

5. Financial Implications

The project is funded through £28.0m City Deal Funding, £16.4m public sector funding and £16.1m private sector funding. There is Ongoing engagement with WEFO to obtain additional financial support due to increased costs resulting from inflation/commodities increases and availability.

Risks will be managed through monitoring and evaluation at both Project and Programme level and reported, via the Swansea Bay City Deal's Programme Management Office, to the Joint Committee, where appropriate.

Specific Programme financial risks are outlined within the strategic case component of the Digital Infrastructure Business Case.

The procedures around the management of City Deal funding are detailed within the Joint Committee Agreement.

6. Legal Implications

There are no legal implications associated with the report.

Background Papers: None

Appendices: None