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## Welcome to the SELKIE Project newsletter

SELKIE is a cross-border project which aims to boost the marine energy industry in Wales and Ireland by bringing together leading researchers and businesses to improve the performance of marine renewable devices and technologies. <u>University College Cork</u> are leading the project in partnership with <u>Swansea University</u>, <u>Marine Energy Wales</u>, <u>Menter Môn</u>, <u>DP Energy Ireland</u> and <u>Gavin & Doherty Geosolutions</u>.

The project is funded by the European Regional Development Fund through the Ireland Wales Cooperation programme.

#### Contents:

Subscribe

- Selkie Tools and Models Progress
- Spotlight on the Selkie Network
- Selkie Events
- Recently Published Selkie Research Papers
- Selkie Partners' News

### **SELKIE Tools and Models progress**

As part of the SELKIE Project, multi-use technology tools, templates, standards and models are being created for use across the Marine Renewable Energy industry; which will be tested and validated on wave and tidal pilot demonstration technologies. The pilot testing will advance knowledge and improve marine energy devices in terms of their reliability, survivability, operability, stability and commercial viability.





Images left to right: GIS-TE Tool Screen capture, Mooring line.

In this edition of the SELKIE Project newsletter, we will be looking closer at the GIS Techno-economic tool in demonstration, as well as, a presentation and demonstration of the Foundations & Mooring Tool. Read our SELKIE Tool blog and watch the accompanying videos below.

In line with promoting the SELKIE tools to the Marine Renewable Energy sector, we have held several virtual and in-person events to raise the profile of the open source tools and engage with the wider supply chain. Our last Selkie Supply Chain Networking event was held at the end of February in Pembrokeshire and was attended by 40 in-person attendees and 20 virtual remote attendees. An overview of the event and speaker presanctions can be found below

BLOG - SELKIE Tool Series: GIS Techno-economic Tool Demo

**BLOG - SELKIE Tool Series: Foundation & Mooring Tool Demo** 

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The Offshore Renewable Energy catapult recently launched their MEECE marine test bouy at Marine Energy Test Area's (META) Dale Roads site. The buoy will provide a unique test and demonstration facility within META, allowing innovative new products and services to be developed at minimal cost and risk to companies.

As part of the bouy's data collection functionality, the SELKIE data logger is installed. Current data sources include GPS, Load Cells, NMEA connected instruments & interfacing with the buoy's Victron power management system.



MEECE Bouy in position at META's Dale Roads Site.

Click here for more information on the SELKIE Data Logger

#### **SELKIE C-ADCP Drone Captured Short film**

SELKIE commissioned a drone promotional video to be created to document the deployment and the recovery of the Converging-Beam Acoustic Current Profiler tool that has been developed by University of Swansea. The tool was deployed and recovered at the Marine Energy Test Area between January and February and has gathered high resolution tidal stream data.

Click Here to watch C-ADCP short film

Click here to read more about Testing the C-ADCP tool

### **Spotlight on the SELKIE Network**



Join our growing network of businesses! We are looking to bring together Welsh and Irish fabricators, engineers, marine operators, consultancies, marine energy device developers and more. Some of the companies already signed up are Bombora Wave Power, Orbital, Sabella SA, Magallanes Renovables, Ocean Energy, Mainstay Marine Solutions, FAUN Trackway, Alpha Marine and Bartlett Engineering, to name a few.

This month we are putting a spotlight on recently joined SELKIE Network members; CGG. Read more about the company and find what they have to offer below.

CGG have expressed an interest at the idea of forming a consortium with other network members to pursue some of the recent funding streams such as the European Commission's Innovation Fund second call out. (EUROPEAN INNOVATION FUND CALL OUT | Marine Energy Wales).

SELKIE network members might also want to consider applying for Interreg North-West Europe Programme 2021-2027. <a href="Interreg NWE 2021-2027">Interreg NWE 2021-2027</a> Call 1 | Interreg NWE (nweurope.eu) Call 1 is now open until 15th June 2022.

What do you get from signing up to the network?

economic support, business planning and R&D grant preparation as well as the opportunity to network and gain contacts with both industry and academics.

Contact matt.telfer@marineenergywales.co.uk for any enquiries or further details on joining the SELKIE Network.

Read more about CGG here

### **SELKIE Events**

## SELKIE Exhibits and Presents in Open Access Tool Workshop at Marine Energy Wales Conference 2022

The SELKIE Project were delighted to participate at the first in-person Marine Energy Wales conference in 3 years, which took place on 22nd and 23rd March 2022 in Llandudno. The conference was well attended having sold out on delegate tickets ahead of the conference. Selkie joined 29 other exhibitors from across the MRE sector in the exhibition hall where our workpackage leads represented the project interacting with developers, ports authorities, test centres and many more relevant stakeholders, promoting the open source tools that should all reach completion come the summer. On day two, Selkie along with Wave Energy Scotland, presented at the Open Access Tools for Marine Energy Workshop. We were excited to present the first live working demonstrations of our GIS Techno-economic tool as well as our Foundation and Mooring tool, both of which aid decision support, design, mapping and modelling and provide key information for feasibility studies.

A particularly momentous part of the conference was when the First Minister, Mark Drakeford, delivered his keynote address to the 270 delegates, stating that this is a watershed moment and pledged the Government's support on marine Renewable Energy and that it must play a key part for the resilient and diverse energy sources we need. Mr Drakeford pointed to the tangible commitment of the alliances, projects and partnerships already underway in Wales, and stressed the continued investment and confidence of the Welsh Government.





Left to right: Selkie Exhibition at MEW Conference. Selkie tool demo at MEW Conference workshop

#### SELKIE Third AGM, MaREI Centre, Cork, Thursday 19th May 2022

Selkie will be holding our third and final Annual General Meeting at the MaREI Centre, the world-leading Science Foundation Ireland Research Centre for Energy, Climate and Marine, coordinated by the Environmental Research Institute (ERI) at University College Cork.

The AGM will cover all project progress to date and is an opportunity for all Workpackage leads to give updates on their workflows and deliverables. This year's AGM will follow a hybrid format with Workpackage leads attending both in-person and virtually. The project has covered a lot of ground since the last AGM and we are excited to convene, coordinate and collaborate in Cork.



Drone captured aerial view of MaREI Centre

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### Workpackage 7 - Sensor Optimisation to present at PRIMaRE, 6 - 7 July, Exeter

Dr Iain Fairley of Workpacakage 7 will be presenting the latest work on SELKIE drone Methodology, which has been tested and validated across Wales and Ireland.

The PRIMaRE annual conference provides a forum for exchanging the latest research & development and fostering collaborations on Marine Renewable Energy. It covers a wide range of topics, including: technology, policy, environment, hydrodynamics, resource characterisation, materials, operations and management.

Click here for more information on SELKIE Drone Methodology

## Workpackage 4 - GIS & Techno-Economic Tool development to Present at ERSI User Conference, 11-15 July, San Diego

Workpackage 4 lead Ross O'Connell PhD, has been approved to travel to California in July for the world's ESRI GIS summit and will present on Selkie and our Geographic Information System & Techno-Economic Calculator tool.

Ross will Join thousands of users from around the globe and discover how they're leveraging GIS capabilities to solve problems, create shared understanding, and map common ground.

### Workpackage 9 - Sustainability to Present at RSAI-BIS Conference, 5-7 July, Sterling

Dr. Frank Crowley, Economics, Cork University Business School (CUBS) and Co-Director of the Spatial and Regional Economics Research Centre(SRERC) at UCC will be presenting his work on Firm research, development, commercialisation and triple helix interactions in the offshore marine energy sector at the 48th Regional Science Association International - British and Irish Section Conference

The RSAI-BIS promotes the advancement and dissemination of regional science among academics and practitioners internationally. To this end its members develop internationally recognized regional science research in economics, geography, planning and other relevant disciplines, contributing to topical regional discussions in the policy and business arenas

# Recently Published SELKIE Research Papers

Workpackage 5 - Foundation and Mooring Model D.1 report: Review of Foundation and Mooring Tools for Marine Energy can be accessed here: <a href="D5.1-report.pdf">D5.1-report.pdf</a> (selkie-project.eu).

Workpackage - 6 Physical & Numerical Modelling of Wave & Tidal Array, manuscript on FloWave CFD analysis published by Renewable Energy Journal can be accessed here: Robust validation of a generalised actuator disk CFD model for tidal turbine analysis using the FloWave ocean energy research facility.-ScienceDirect

Workpackage 9 - Sustainability paper on Interactive Linkages, Non-Interactive Linkages, and Innovative Activity in the Offshore Renewable Energy Sector can be accessed here: <a href="https://www.selkie-project.eu/wp-content/uploads/2022/03/PAPER SELKIE SB.pdf">https://www.selkie-project.eu/wp-content/uploads/2022/03/PAPER SELKIE SB.pdf</a>

Selkie Masters Paper 'An Atlas of Piezoelectric Energy Harvesters in Oceanic Application' Sensors | Free Full-Text | An Atlas of Piezoelectric Energy Harvesters in Oceanic Applications | HTML (mdpi.com)

### **SELKIE Partners' News**

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DP Energy team welcome Ministers to new office.

#### **DP Energy Opens New Office in Pembrokeshire**

Last month SELKIE project partners DP Energy Group who have been testing and validating the Selkie tools, officially opened their new office in Pembroke Dock. Marking the occasion, there were visits from Secretary of State for Wales, Simon Hart MP, and Welsh Government Minister for Economy, Vaughan Gething MS. DP Energy Group have hired a local team of industry experts to help develop projects both in Wales and internationally.

Read more about DP energy's latest Welsh venture



## GDG Commissioned for National Ports Study

Specialist offshore engineering and design consultancy, Gavin & Doherty Geosolutions Ltd (GDG), is delighted to announce that it has been commissioned by Wind Energy Ireland to undertake a study of Ireland's national ports. The assessment will seek to clarify the current position, as well as identifying the strategic port development opportunities for the future where relevant. The study, funded by Belfast Harbour, DP Energy, ESB, Inis Offshore Wind, Ørsted and RWE Renewables, will focus on enabling both fixed-bottom and floating offshore wind projects to be facilitated from Irish ports.

Read more about GDG's port study

#### **Research Officer Vacancy Swansea University**

Our project partners Swansea University are recruiting for a fixed term research officer to work on the development of a digital twin modelling capability for buildings, specifically focused on the energy management.

Click here for Vacancy details







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