

ORJIP Ocean Energy: Steering Group Meeting 3

Tuesday 3rd May 2016, 1000 - 1500

Welsh Government, Cathays Park, Cardiff, Wales CF10 3NQ

Attendees

Name	Organisation
Andrew Nicholas (AN)	Welsh Government
Rosie Kelly (RK)	The Crown Estate (TCE)
John Robertson (JR)	The Crown Estate
Douglas Watson (DW)	The Crown Estate
Caitlin Long (CL)	EMEC
Paul Ellsmore (PE)	ORE Catapult
Sue Barr (SB)	OpenHydro
Kate Smith (KS)	Natural Resources Wales
Nia Phillips (NP)	Natural Resources Wales
Tim Carter (TC)	Tidal Lagoon Power
Finlay Bennet (FB)	Marine Scotland
Clodagh McGrath (CM) (by phone)	DP Energy
Karen Hall (KH) (by phone)	Joint Nature Conservation Committee
George Lees (GL) (by phone)	Scottish Natural Heritage
Joe Kidd (JK)	ORJIP OE Secretariat, MarineSpace
Ian Hutchison (IH)	ORJIP OE Secretariat, Aquatera
Jude Hamilton (JH)	ORJIP OE Secretariat, Aquatera

Item	Action(s)
IH (Chair) welcomed attendees and provided housekeeping overview	None

Item	Action(s)
<p>Steering Group Roundtable Update</p> <p>Attendees were asked to provide an update on their activities relevant to ORJIP OE. These activities will be referenced in the Forward Look as appropriate.</p> <p>Key points are attached in Appendix A.</p>	<ul style="list-style-type: none"> • Update Forward Look based on round table updates – Secretariat • Raise awareness of availability of EMEC wildlife data through ORJIP OE Network and support EMEC in making data open source – Secretariat • Circulate details of biofouling monitoring undertaken by developers to date to ORE Catapult e.g. ICIT Heriot Watt studies at EMEC, video monitoring data Voith Hydro at EMEC – Secretariat (Aquatera) • Research ideas sought for EMEC Pelamis P2 machine. Raise awareness of this opportunity through ORJIP OE Network – Secretariat. • Decommissioning – include a placeholder in next Forward Look to address relevant issues and arrange a group discussion on financial guarantees and environmental/operational effects – Secretariat • Establish a sub-group to facilitate discussions between developers to optimise learning opportunities across sites – Secretariat • A dissemination event through ORJIP OE is under consideration to highlight data and tools available regarding connectivity of Natura sites and marine renewables developments - TCE • Circulate key reports to Network as they are published (including the State of the Science Report) – Secretariat • Consider adding WFD compliance in the next Forward Look – Secretariat • Raise awareness of consent applications, consent decisions, PEMPs etc as they are issued – Secretariat • Facilitate consultation around Marine Scotland Survey Deploy and Monitor (SDM) review - Secretariat
<p>Update from Secretariat</p> <p>IH and JK provided an update on progress to date (refer to attached presentation)</p>	<ul style="list-style-type: none"> • Engage with NERC - Secretariat • Update and share consultation database - Secretariat • Circulate database of monitoring undertaken to date - Secretariat
<p>Tidal Range Forward Look</p> <p>Call for Evidence for Tidal Range issued in March 2016. Responses received from approximately ten organisations, awaiting responses from a few more. Responses will be used include tidal range in the next Forward Look. It is hoped that a workshop will then be held to ensure a consensus has been reached.</p>	<ul style="list-style-type: none"> • Review responses and draw up list of key consenting issues and high priority projects – Secretariat • Ensure that there is clarity in the next Forward Look between tidal current, wave and tidal range – Secretariat
<p>Network event: Design envelope workshop</p> <ul style="list-style-type: none"> • Cardiff Demo zone workshop report should be the starting point for workshop discussion. • Workshop should focus on Regulators and developers. • Key contacts: Annie Say, Tim Norman (NIRAS), PTEC to provide update given their recent experience in gaining consent. • Consider webinar for presentations with subsequent meeting to follow with key representatives only. 	<ul style="list-style-type: none"> • Progress plans for workshop – Secretariat • Circulate Doodle Poll to check availability – Secretariat

Item	Action(s)
<p>Collision risk workshop at ICOE, February 2016 Network event held in partnership with Annex IV, ORE Catapult and EIMR.</p>	<ul style="list-style-type: none"> Workshop report due to be published shortly. To be circulated to Steering Group and wider Network – Secretariat.
<p>ORJIP OE website</p>	<ul style="list-style-type: none"> Include 'user guide' to Forward Look on ORJIP OE website - Secretariat
<p>Steering Group and Network</p> <ul style="list-style-type: none"> DG Mare joined Network in April 2016. <p>Steering Group was asked if there are any other key participants that should be invited to join Network.</p> <ul style="list-style-type: none"> NERC MOD – Network invitation sent No others identified 	<ul style="list-style-type: none"> NERC – RK and IH to follow up MOD – Secretariat to follow up
<p>Funding opportunities</p> <p>George Lees attended DECC SEA meeting recently. DECC could be a key funder for ORJIP OE priority projects.</p> <p>Funding opportunities will continue to be circulated to the Network</p>	<ul style="list-style-type: none"> Send DECC list of priority projects (GL and IH)
<p>Next steps and opportunities for ORJIP OE</p> <p>RK confirmed budget for second phase of Secretariat with contributions confirmed from TCE, Marine Scotland, Welsh Government, NRW and SNH. Funding for 12-month programme.</p> <p>Focus of priorities for Secretariat phase II:</p> <ul style="list-style-type: none"> Bridging gap between science and policy is a key aim (NRW). Additional funding may be available from NRW if work could be done to produce position papers on key issues to streamline consenting of projects. This could be done in collaboration with other programmes i.e. OES Annex IV A task of the Secretariat Phase II should be to secure funding for the next follow-on phase of the Secretariat to ensure the role is self-sustaining. Part of the budget should be set aside to allow time to identify potential sources of funding. This will be discussed further during the final stage of the Pilot Phase. 	<ul style="list-style-type: none"> Re-issue cost and task breakdown to match revised budget (Secretariat) Discuss position papers (IH, RK and KS) Delegation of tasks through Steering Group – Secretariat Raise awareness of ORJIP OE and to help secure funding for continuation of Secretariat – Steering Group members. Discuss funding opportunities with Renewable UK and Scottish Renewables (RK)
<p>Content of Summary Report</p> <p>IH circulated ORJIP OE work plan and progress by task to Steering Group</p> <ul style="list-style-type: none"> Clear tag lines required for ORJIP OE that can be used to sell the project by Steering Group members. Document relationship between ORJIP OE and other organisations. Include outline of Secretariat role. Include key signposting to key parts of the Forward Look. 	<p>Produce Summary Report - Secretariat</p>

APPENDIX A : ROUND TABLE UPDATE ON RELEVANT ACTIVITIES FROM THE STEERING GROUP

EMEC (CL)

- Several new developers coming on site in 2016-2017:
 - Tidal
 - Sustainable Marine Energy (SME)
 - Scotrenewables
 - Nautricity
 - Tocardo
 - Wave
 - Laminaria (Billia Croo, 2017)
 - CorPower (Scapa Flow nursery site)
- EMEC electrolyser €2 million funding approved for 'Big Hit' project to use electricity to produce hydrogen.
- EMEC POD due to be deployed in 2016.
- First full decommissioning to date at EMEC will be undertaken in 2016.
- Section 36 licence now obtained. Variation to S36 is required for greater number of turbines.
- EMEC Pelamis – mooring system is in place. Research ideas sought for Pelamis.
- EMEC wildlife monitoring ended in December 2015. Report due to be submitted to SNH in May 2016 for review.
- All EMEC data to be open source. Seeking available platforms for distribution.

ORE Catapult (PE)

- Several newly published reports available from ORE Catapult website: <https://ore.catapult.org.uk/ore-catapult-reports>
- Recent presentation at Bristol Tidal Energy Forum in April 2016 on biofouling to raise awareness of the potential scale of the issue; a key issue that needs to be addressed to avoid future issues.
- Biofouling predictive mapping feasibility study. Need to raise awareness amongst developers for the need for collection of biofouling data, need to incentivise data collection and provide information on what to measure.
- Biofouling sensor to measure biofouling growth – need to find a wider market not just marine renewables for it to be commercially viable.
- CENSIS Tidal blade collision sensor. Feasibility study complete.
- ORE Catapult currently seeking funding to move on from feasibility studies.

OpenHydro (SB)

- Four turbines to be deployed in 2016, two in France and two in Canada
- Extensive monitoring planned for Bay of Fundy, Canada. Turbid environment therefore not suitable for video monitoring.
- Consenting requirements in France are less stringent than in UK. The Regulators acknowledge and accept risk however the priority is to progress the industry. Top down policy drivers may be required to progress industry in the UK.

- Stakeholder engagement is a key issue. Early stakeholder engagement was key to successful application in France, particularly early engagement with lobster fishery. Onshore stakeholder engagement also needs to be considered.
- Decommissioning is another area that is currently overlooked. What can be learned from what has been done to date e.g. SeaGen, EMEC? More work is required to avoid potential issues in the future. Data required to inform decommissioning.
- Environmental monitoring – OpenHydro’s focus is on marine mammals, fish and underwater sound.
- Further analysis of video footage to investigate presence/absence of fish around OpenHydro turbine at different states of tide is due to commence. Hundreds of hours of video footage available.
- Cape Sharp Tidal data expected in the next 12 months. Focus is on marine mammals and noise. Monitoring is aimed at pre-empting future data requirements.
- A gap analysis will be undertaken once monitoring data is available from the four deployments.
- Funding is required to carry out further data analysis of data gathered to date. Data is being collected but often not enough funding available to undertake extensive data analysis.
- Facilitate getting data from industry to academia as academia may have better access to funding opportunities.
- Aim is to publish peer-reviewed research papers.
- Aim is to accelerate science to policy.

NRW (KS)

- NRW is working in partnership with Bangor University, SMRU Consulting and Menter Môn (third party manager) to explore principles for defining flexible design envelopes using Morlais Demonstration Zone and marine mammals as a case study. Exploring using receptor impact pathway combinations rather than technology-led design envelopes (as per findings of Cardiff Demonstration Zone workshop). Report due in July 2016. Will draw on experience at other test sites which have used flexible PDE (EMEC/WaveHub/PTEC Isle of Wight).
- NRW is working with Welsh Government to explore how practical tools and frameworks for delivering a risk based approach to consenting might help deliver the policies within the Wales National Marine Plan (currently in draft), using tidal stream as a case study. NRW keen to explore what RBC means in practical terms and what policy might be needed to support greater risk tolerance in consent decisions. Due to report Autumn 2016 but Welsh Government will ultimately decide how to use the outputs and the degree to which they’ll be disseminated or applied to the WNMP.
- Review of Marine spatial plans by Anne-Marie O’Hagan in Annex IV 2016 State of Science Report (<http://tethys.pnnl.gov/publications/state-of-the-science-2016>)
- Outcome of Welsh election on 5th May could affect work priorities over the coming months.

Tidal Lagoon Power (TC)

- Cardiff baseline surveys ongoing. Radio-tagging study of four species (waders and waterfowl) looking at how birds used the footprint of the lagoon in the estuary over different tidal cycles. Surveys to continue until May 2016. BTO project with WWT involvement. Data to be used to inform individual-based modelling.
- Over-wintering birds in Severn Estuary SPA. Study looking at food availability before and after birds arrive in estuary. Work undertaken by Ocean Ecology Consultants.
- Work underway with NRW investigating saltmarsh status to inform Water Framework Directive.
- TLP funding a PhD on *Sabellaria spp.* (University of Swansea) and invasive species biotope mapping.
- Other studies include socio-economic benefits of tidal lagoons

- Marine mammal monitoring: aerial surveys and C-PODs, due to commence summer 2016 for 12 months. Findings of 12-month study will be used to decide whether further survey data is required.
- Seeking agreement from regulators on what criteria would need to be met to conclude one year of marine mammal data is sufficient. Criteria could be around population density or behavioural data.
- Long-term oceanographic data is being collected at nine locations across the bay. Data being processed will be used to feed into modelling work to investigate potential effects of tidal lagoon development.
- Swansea project – impact on fish is a potential key concern.
- Currently developing an Adaptive Management and Monitoring Plan (AMMP) with the key aims of confirming the levels of impact and the effectiveness of mitigation measures. Key focus is on fish, marine mammals, benthic ecology and noise. The draft AMMP will be issued for consultation to Topic Review groups.
- Currently two main strands to research:
 - Modelling effects of fish passing through a turbine, possible consequences of collision; and,
 - Understanding the potential for impacts – data being gathered on presence and movement of migratory and resident fish species within the bay.
- Decommissioning is also an issue for Tidal Range, 120 year lifetime of development. Various scenarios possible at the end of project lifetime.
- Cardiff timescale – submission due early 2018.
- Key issue is the level of survey effort/baseline data that is required. Two years versus one year. BTO has data covering 30+ years for the SPA. Is novel survey data really required in all cases?

The Crown Estate (RK)

- TCE as a Competent Authority is required to undertake plan-level HRAs for TCE's activities which are considered to be 'plans'. ABPmer commissioned to review summary of previous plan-level HRA for wave and tidal leasing undertaken for TCE in 2014. This report can be issued through ORJIP OE Network when available.
- A workshop was held in February 2016 regarding connectivity of Natura sites and marine renewable development projects. Conclusion of workshop was that there are already numerous tools and data available.
- A dissemination event through ORJIP OE is under consideration to highlight data and tools available.

Marine Scotland (FB)

- Environmental monitoring – the key focus for Marine Scotland is the Scottish Government Demonstrator project at MeyGen. Harbour seal collision risk is the key issue being investigated. The aim of this project is to allow the Regulator to be better informed regarding collision risk by undertaking robust monitoring around an early array. Integrated monitoring programme involving technologies covering different spatial scales around a turbine. Initial funding is for 12 month study. Additional funding is being sought by Phil Gilmour.
- Close collaboration between monitoring programmes at MeyGen (e.g. Beth Scott Aberdeen University and Carol Sparling SMRU) to ensure projects are complimentary.
- There is the possibility that findings may be site-specific. Further investigation is required to determine whether effort focused on a single site is preferable to effort spread across several sites. Could potentially look at funding research at other deployments.
- More co-ordination is required to ensure data collection is consistent across sites.

- More work is required to determine if data collection can be aligned across separate sites and used to address potential issues. Option could be to issue Requests for Information to ensure data is collected in same manner across separate sites.
- Survey, Deploy and Monitor (SDM) – Scottish Government plans to revise policy soon (Paul Smith leading this) as industry has moved beyond that which the policy was originally intended.
- Revised SDM policy will have more detail for post-consent monitoring for commercial scale deployments. Consultation will be required on the policy.
- RiCORE project is due to end in June 2016; this project included a review of SDM. A review of site characterisation data gathering and post-consent monitoring requirements across different countries has been undertaken.

SNH (GL)

- SNH have severe funding constraints this year. Focussing on providing small funds (in region of £5k to £10k) to partnership projects e.g. with Marine Scotland.
- SNH has contributed funding to a study by CREEM (St Andrews University) for the development of a power analysis tool. A kick-off meeting was held last week. The aim of this study is to design a software package that can be used by non-specialists to aid design of monitoring studies that have sufficient power for use in assessing impacts.
- SNH Bill Band Collision Risk Guidance was out for consultation in autumn 2015. Due for publication following the Scottish Government election in May 2016.
- EMEC wildlife monitoring report due to be submitted to SNH by EMEC in May 2016. Final report due to be published following peer-review process.
- Guidance on displacement of birds at offshore wind farms is due to be published shortly.

DP Energy (CM)

- Design envelope Network event should also cover onshore and offshore developments and the issue of splitting applications (separate applications for onshore and offshore).
- Need to continue to encourage the MODs engagement with the programme.

JNCC (KH)

- JNCC have just recently joined the Steering Group.