Summary report of the Virtual Floating Offshore Wind (FOW) planning project delivered by NFFO with support from The Crown Estate (TCE)

Delivered for NFFO by:

Nathan de Rozarieux
Colin Warwick MBE
Merlin Jackson

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Offshore Wind Evidence + Change Programme

THE CROWN ESTATE

Contents

1. Background

As part of the UK government's commitment towards net zero emissions by 2050 and plans to Build Back Greener in 2020 it outlined an objective to deliver 1GW of floating offshore wind by 2030. This has subsequently been revised in the British Energy Security Strategy with an objective of 5GW of Floating Offshore Wind as part of an overall objective of 50GW of Offshore Wind in UK Waters by 2030[1].

As identified by the ORE Catapult's project to review potential interactions between the fishing industry and floating offshore wind, the new and floating nature of floating offshore wind technology has significant potential to displace existing fishing activities, either due to the complete obstruction of fishing operations, or unacceptable operational risk to fishers, with subsequent ecological, economic and social impacts on affected coastal communities[2].

Furthermore, the Climate Change Committee estimates that significant additional offshore wind generating capacity will be needed to meet net zero commitments with scenarios extending to 140GW generating capacity by 2050. The scale of these targets and scenarios place an unprecedented pressure on marine space and a high probability these activities will interact with customary fishing grounds. Developments will be significant and therefore the scale is likely to be more significant and beyond anything seen in the roll out of marine renewable energy in UK waters to date.

Fisheries are one of a number of considerations which must be taken into account to achieve successful siting choice for offshore wind farms. However the heterogeneous nature of fishing activities, both in terms of distribution, seasonality and method and still limited understanding over how fisheries may interact, co-exist or be excluded access from fishing grounds by individual projects have hampered its up-front consideration in early site selection decisions. This inevitably results in narrowing the options for co-existence as site selection decisions are concluded and project plans are refined at the consent application stage and post consent.

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[1] https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy

[2] https://ore.catapult.org.uk/?orecatapultreports=floating-offshore-wind-fishing-interaction-roadmap

Wind farm design, including turbine spacing and layout, are also likely to be fundamental determinants of whether fishing activities can co-exist with offshore wind. However, relative to an open sea state, a wind farm sited on fishing grounds will likely impact fishing activity to some degree, as will associated installation and maintenance activities.

Under current fixed-foundation wind farm turbine spacings, fishing methods that require wide areas in order to deploy gear such as large seine netting and pair trawling are incompatible. On the other hand, pot fisheries have been found to be able to operate in some constructed projects. For other fishing methods, such as single trawling and static nets, the jury is still out. There is presently a lack of evidence demonstrating significant numbers of vessels operating these gears within constructed fixed wind farm sites.

Currently, the fishing industry is not a statutory consultee in the consent application process for marine renewables (or any offshore infrastructure) and as a result the fishing industry is concerned that there is the possibility for significant conflict with the rapid expansion of offshore wind in terms of securing future access to parts of the seabed. In order to avert this potential conflict there has been agreement, between stakeholders from both the fishing and offshore renewables industries, that dialogue is needed to share information (both ways) in order to promote and strive for an approach where the shared goal is co-existence.

Recognising the importance of co-existence, The Crown Estate, through its Offshore Wind Evidence and Change (OWEC) programme, has therefore supported the National Federation of Fishermen's Organisations (NFFO) to undertake a series of workshops to facilitate such dialogue, the outputs and recommendations from which are contained below.

2. Introduction

The fishing industry believes that investment of resources (time and money) into good planning and commitment from floating offshore wind stakeholders (i.e. developers, UK Governmental Organisations and The Crown Estate) to work collaboratively with the fishing industry is essential to avoid the imminent conflict of the two sectors.

NFFO identified that, to determine methods to enable fisheries involvement in site selection and project design and maximise the potential for co-existence would require a pilot exercise at a pre-commercial / competitive stage outwith current offshore wind leasing rounds aimed at informing the planning of a 'virtual windfarm' free from commercial influence, and hard red lines on charts. This would allow all stakeholders to explore each other's principles, specialist technical knowledge and problem-solving capabilities in a more co-operative fashion than would be possible in a 'live' planning exercise, but with the lessons from the exercise then being used in the actual planning processes as they advance.

It is hoped that the results of this exercise will in turn foster greater understanding among industry stakeholders and Floating windfarm developers and technology developers, and planners , informed by physical, operational, and environmental constraints, and in what ways and by what means they may be optimized to reduce potential conflict and facilitate co-existence with fisheries.

3. Aims

The aim of the project was to take positive, practical steps to support the drive for co-existence between the offshore renewable industry and UK fishing industry.

The project enabled 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.

To achieve this a collaborative pilot project was developed, that through a series of three evidence-led, expert workshops explored 'real life' constraints in the planning of a 'virtual' offshore wind energy planning exercise with fishing industry and offshore wind energy stakeholders. The virtual site considered would theoretically be capable of producing 100MW of power.

The key benefits were agreed as follows:

i. Minimise economic disruption to both industries
ii. Optimise timeline for planning approvals
iii. Provide possible opportunities for 'win-win' outcomes

4. Approach

A series of three workshops to be hosted at a venue where GIS layers can be viewed modified and discussed in real time.

The project would consist of two key phases:

4.1. Project planning, co-ordination and desk-top research

4.1.1. A desk top collation of 'constraints' from renewables sector would include:

- Wind Capture area/ enough wind to be viable.
- Engineering preference for Floating sub-structure. Spar/semi-submersible/tension leg limits dictated by ground type versus cost.
- Geology also dictating cost of anchor system etc.
- Water depth.
- Port Infrastructure.
- Accessibility / wave heights.
- Onshore Grid connection.
- Length of export cable and the restrictions that brings.
- Scale of floating windfarm that is viable bearing in mind the constraints above/ Number of turbines/KM Sq.
- Array layout parameters from an engineering perspective.
- Mooring Spreads.

4.1.2 A desk top collation of considerations from fisheries sector would include:

- Site selection pre-engagement rather than post lease agreement.
- Importance of specific grounds to fishing.
- Wind farm characteristics to enable potential for coexistence.
- Best use of Fishermen's data/ best interpretation of Fishermen's data.
- Site layout. Grid vs rows vs one straight line etc. Fishermen use the tide and coexistence may be improved by array layout.

- Export cable route selection. If a site manages to miss an important fishing area, the export cable route still has the ability to go through an important fishing area.
- Cable burial depth. The repercussions of poor burial depth/ future costs/ future displacement/ potential closed areas.
- Cable burial method. The reasons why some burial methods impact certain methods/types of fishing more than others.

4.2. Convene project workshops

4.2.1. Project stakeholders, partners and enablers:

Partners

- The Crown Estate
- NFFO

Stakeholders

- Offshore developers (Orsted, SSE Renewables, EDF Renewables and Ocean Winds)
- Fishing industry (NFFO, Cornish FPO, Southwestern FPO, Western FPO, South Devon & Channel Shellfishermen)
- Defra & MMO
- Natural England
- Cetic Sea Power

Enablers

- The Crown Estate
- Consultants

4.2.2. Workshop 1 (over 2 days – pm session on day 1 and am session on day 2)

- Setting the scene
- Introductions

- Understanding constraints – macro scale
- Defining and explaining fishing gears and fishing activities

4.2.3. Workshop 2 (over 2 days – pm session on day 1 and am session on day 2)

- Setting the scene
- Introductions
- Understanding constraints – intra site planning and micrositing
- Mobile gears

4.2.4. Workshop 3* (over 2 days – pm session on day 1 and am session on day 2)

- Setting the scene
- Introductions
- Understanding constraints – intra site planning
- Static gears

5. Workshops

5.1. Workshop 1 – Introduction – broad scale site selection

The workshop was held in London on 2 December 2021 with 24 stakeholders, 20 in person and a further 4 joining online (agenda and list of attendees can be found at Annex I).

5.2. Workshop 2 – Intra-site planning – mobile gears

The workshop was held in Newlyn, Cornwall on 2 March with 26 stakeholders, 18 in person and a further 8 joining online (list of attendees can be found at Annex II).

5.3. Workshop 3 – Intra-site planning – static gears

The workshop was held in Newlyn, Cornwall on 3 March with 25 stakeholders, 17 in person and a further 8 joining online (list of attendees can be found at Annex III).

6. Key findings

6.1. Recognitions / shared understanding

6.1.1. The Crown Estate

- Recognised the challenge in its role to balance the social, economic and environmental impacts of offshore wind, including the concerns and spatial needs of the fishing industry, whilst enabling the ambitious Governmental vision towards Net Zero and supporting offshore wind developers seeking to invest in safe and economically viable sites.
- Recognised the key to unlocking this challenge was to support coexistence wherever possible through site selection and marine estate management.

6.1.2. Offshore Renewables

- Recognised the importance of early engagement with the fishing industry in order to avoid decisions that could cause conflict points in the longer term and demonstrated this through reference to previous projects in other areas.
- Recognised that the cumulative scale of future offshore / floating offshore wind is on a greater scale than anything previously delivered in UK waters and this would necessitate greater engagement of offshore fishing activities (from UK 12nm to the median line).
- Recognised the need to better understand the use of fishing gears in different areas and in particular the ability of vessels to fish in close proximity to offshore installations in order to inform the design of future offshore wind developments.

6.1.3. Fishing industry

- Recognised that the emergence of Floating Offshore Wind in the waters off the coast of SW England was inevitable given its prominence in the national energy strategy and therefore sought engagement in the process to determine siting of these installations at the earliest opportunity to identify the best means of co-existence through siting and design.

- Offered to contribute fishing data and knowledge and demonstrated willingness to engage in 'virtual planning' as means of testing the real planning process.

- Notwithstanding its willingness to engage in this process the industry believes it has critical part to play in UK food security and is urging Government to take this into consideration and provide assurance over access to high-value fishing grounds. In contrast, renewable energy developers believe offshore wind developments will make significant contribution to green energy and energy security.

- Recorded that while the UK fishing activity in the virtual planning area and wider Celtic Sea was high (resulting in landings of £100M 1st sale value pa) the foreign activity of principally French and Belgian was in the order of 3 or 4 times of that of the UK fleet.

6.2. Floating Offshore Windfarm planning process

6.2.1. Site selection

- The parameters for site selection were well described by The Crown Estate and demonstrated using a range of GIS data layers and presentation of the virtual project outcomes.

- There was agreement that while Vessel Monitoring System (VMS) could provide useful data on fishing density in a broad scale plan, Automatic Identification System (AIS) could provide far greater resolution and allow site design at a finer scale. The use of plotter data could permit even greater resolution required for intra site planning.

- It was noted that this approach would be limited in respect of predicting offshore fixed netting activity as these vessels are highly nomadic often moving 100 or more miles between trips, requiring up to 40sq.km to deploy nets.

- Both AIS and fishermen's plotter data were used with multiple skipper input to refine the siting of the two 100MW 'virtual sites' for further discussion at workshops 2 and 3.

- The fishing industry caveated the greater use of AIS and in particular plotter data with the need to accompany the data with a fishing skipper; ideally one of the skippers that provided the data in order to provide a narrative that would reveal greater knowledge than lines on a chart or screen.
- Timing of input by the fishing industry was critical as examples were cited where industry input was requested or input after decisions on certain sites had already been made.
- The fishing industry questioned why there was not direct fishing industry input into the process at this early stage and why the fishing industry was not considered as a statutory consultee; this was noted but was not discussed in depth as outside the scope of the project which was practical in focus.

6.2.2. Industry engagement

Those engaged within the workshops highlighted three significant strands of engagement:

<u>Communication</u>

- Identifying and engaging the 'right' stakeholders early in the process
- For the offshore fishing interests (outside 12nm) this could be achieved relatively easily by working through the NFFO and constituent regional POs who could provide detailed understanding of member vessel's activity based on AIS data, landings data, catch value data and access to the skippers that are active in the fishery on a daily basis.
- For the inshore fishing interests (inside 12nm) this could be achieved through NFFO regional committees, IFCAs, local Associations and also POs (as some also had a number of under 10m vessel owning members)

Information

- The clear request from industry was for developers to share as much detailed information as possible to enable constructive discourse, even if this has to be restricted through sign up to a Non-Disclosure Agreements or similar restriction to access.
- Provide information in a format and means that was accessible to fishermen; perhaps using Seafish Kingfisher as a vehicle to achieve this as this service is already provided to the oil & gas industry and submarine telecoms sector.

Timing

- The fishing industry and developers both agreed the clear benefits of, initiation of discussions early in the process before lines are committed onto charts.

6.2.3. Site design

- The offshore wind developers provided an overview of the key design parameters and outlined some parts where there could be flexibility in design to accommodate fishing activities and also the constraints in other parts of the design.
- There was a good exchange of information of and knowledge from both the offshore wind sector and the fishing industry and a greater shared understanding of the challenges of coexistence.

6.2.4. Fishing within an offshore wind farm

- All sectors of the fishing industry engaged constructively in the scenario of fishing within a floating offshore wind installation. Skippers in each session provided knowledge built on combined experience of in excess of 200 years.

- There was general consensus from both mobile and static gear fishers that in theory a single vessel could fish within a suitably spaced floating offshore wind array; however, for very practical reasons of having to move gears daily or accommodate more than one vessel the common view was that unless very well-spaced this would not be possible and at the level of spacing the offshore wind developers suggested (up to 3km between turbines, with a 'clear corridor' of approximately 1-1.5km) that a site would not be economically viable for fishing activity.

- There was an acceptance that even where best efforts are made to design-in coexistence the footprints of offshore fishing and offshore renewables would inevitably overlap resulting in significant disruption for some fishers resulting in displacement issues for others. Although uncomfortable it was felt that this reality was worthy of further discussion with more information on anchor patterns and cabling being required to move the conversation forwards.

- On balance of discussions catchers from both offshore static and mobile gear sectors identified a preference for site design which, whilst not being designed to accommodate fishing vessel access, used the smallest footprint possible so minimising the impact of the offshore wind activity in any given area, on the basis that they viewed the area inside a site to be economically un-workable in all but extreme scenarios.

- Although not discussed at length it was noted in respect of connecting offshore sites to the National grid via export cables would impact on the inshore static gear sector both within the virtual site but around any part of the SW coastline where there is a highest density of static gear density in the UK, particularly in the 0-6nmm zone, but again this could be minimised through early discussion on routing, seasonality of work and standard temporary compensation / mitigation formulae.

- There was discussion about fishing over cables and the un-avoidable practical need to do so in some areas densely populated with cables as was demonstrated through the proliferation of submarine cabling traversing the virtual search area landing into a small number of well used Cornish beaches.

- It was agreed that the best means of coexistence in respect of export cables was to bury cables to a suitable depth where substrate type and burial techniques allow, and where not possible, to suitably rock armour the cable exposures. It was noted that differing types of cable protection would be more suitable for different fishing gears, and that as fishing gears are specific to the local fishery, local level consultation should be used to identify the most appropriate protection design.
- The issue of compensation for fishing businesses negatively impacted temporarily and permanently by offshore wind development was surfaced as 'an elephant in the room' but not discussed in-depth. Any future meetings should bring this subject to the table as it is unlikely to go away.

7. Recommendations and Next Steps

Following the workshops and a period of reflection, the following recommendations have been identified.

i. Given the clear signal that site selection is the primary factor in reducing potential for conflict between fishing and floating offshore wind, it is recommended that the learnings and dialogue developed through the project are integrated directly into the 'live' Celtic Sea leasing round process.

ii. It is recommended that all entities undertaking spatial design ensure that best available data (such as AIS / Plotter data) is identified in collaboration with the fishing industry, and integrate fisheries expertise and knowledge into site selection through open discourse.

iii. Consider development of a 2nd iteration of the UK Fishermen's Information Mapping (UKFIM) project, using VMS, AIS and plotter data at different scales. This could be in partnership with industry, MMO, Defra and Seafish as the same information would be relevant for the discussion of all spatial pressures on the industry (eg. MPA, HPMAs). As in point ii) this data set would require a 'health warning' that it should be used in conjunction with named skippers for named gear types in named areas.

iv. The fishing industry recognises the good faith in which offshore wind developers participated in this project. However, they are concerned that such best practice may not be followed by all prospective developers in future and therefore it is recommended that the regulatory and governmental authorities consider how best the fisheries industry can be integrated into the leasing round design and consenting process, for example as a statutory consultee.

v. Consideration of further meetings – perhaps annually / twice yearly – focussed on direct (in person) dialogue between floating offshore wind industry engineers and active / experienced fishing skippers. This could be a sub-group of the Fisheries Liaison with Offshore Wind and Wet renewables group (FLOWW) and would provide a means of knowledge sharing between the offshore wind sector and the fishing industry to take stock of new technologies in foundation design, specifically anchoring methods, and for the renewable energy sector to keep informed of developing trends in fishing activities, technology, vessels and gears.

vi. Consideration of a project that predicts probable fishing activity of fleets displaced from an area based on vessel: size, gear type, nationality, previous fishing patterns, prevailing winds/swells, market price, quota availability and regulatory constraints (e.g. licences, access rights / effort allowances under Western Waters rules).

vii. Consideration of a compensation / mitigation displacement model for offshore fishing gear vessels.

viii. It is recommended that developers undertake to design cabling with consideration of fisheries, both for intra-array cabling and for routing of export cables for connection to the grid.

ix. Consideration of a further 'in person' workshop with fishers and floating offshore wind engineers to use physical planning techniques (i.e. with 3-D models) to fully explain and understand the possible interactions between a range of fishing techniques against a range of anchoring systems, array spacings and orientations. Establishing an easy way of working/planning together, to allow the real process to happen.

It is recognised that, within what is a fast paced environment for both industries, activities are already ongoing around a number of these topics, in a number of cases identified and initiated by the discussions had throughout the workshops. This shows the success and value that this project has had in starting discourse and identifying the next steps towards co-existence.

It is important that in starting to address these recommendations that all of the parties retain the emphasis on collaboration and integration of expertise across the industries, recognising the benefits that such knowledge will bring to the continued success of both the fisheries and offshore wind sectors.

8. Thanks

The NFFO and The Crown Estate would like to sincerely thank all of those who have attended the workshops and given their time to this process.

Annex 1 – Agenda, Workshop 1 (6th & 7th December 2021)

Day 1 – Monday 6th December 1pm

1. Welcome & Introductions
    - Project overview - Nathan de Rozarieux & Colin Warwick
2. Setting the scene
    - The Crown Estate - Huub den Rooijen, The Crown Estate
    - Offshore renewables - Claire Gilchrist, EDF Renewables
    - Fishing industry - Barrie Deas, NFFO
    - Q and A session
3. Experience of past and present
    - Merlin Jackson, Thames fisherman and Fisheries Liaison Officer
    - Courtney French, Fisheries Manager, Orsted
    - Q and A session
4. What fishermen want to know
    - Chris Ranford, CFPO and David Stevens, skipper / co-owner of Newlyn-based trawler MFV "Crystal Sea"
    - Q and A session
5. What developers want to know
    - Ian McMyn, Ocean Wind
    - Q and A session
6. Round up session
    - General discussion

Day 2 – Tuesday 7th December 9am

1. Introduction (5mins)
    - Project team - Nathan de Rozarieux & Colin Warwick
2. The process for planning and developing a windfarm
    - The Crown Estate, tbc
    - Claire Gilchrist, EDF Renewables
    - Q&A

3. How GIS is used when identifying potential search areas
    - The Crown Estate, Joe Sykes and Sion Roberts
4. Discussion session
5. Conclusions from Workshop 1 and outline of next steps – Workshop 2 & 3

Attendees, workshop 1 (6 & 7 December 2021)

Fisheries

James Chown	Skipper / owner "Ajax" (offshore netter)
Barrie Deas	NFFO
Joel Dunn	Skipper "Our David George" (beamer)
Juliette Hatchman	South Western FPO
Chloe North	Western PO
Brackan Pearce	Skipper / owner "Spirited Lady III" (trawler)
Chris Ranford	Cornish FPO
Mike Sharp	Skipper / owner "Emilia Jayne" & "Emily Rose" (beam trawlers)
David Stevens	Skipper / owner "Crystal Sea" (trawler)
David Warwick	Seafish, gear technologist

Offshore wind

Courtney French	Orsted
Monica Fundingsland	Equinor
Claire Gilchrist	EDF Renewables
Ian Mc Myn	Ocean Wind
Neil Farrington	Celtic Sea Power

The Crown Estate

Sion Roberts	Marine Consents Manager
Huub den Rooijen	Marine Director
Adrian Fox	Head of Engineering
Joe Sykes	GIS Business Partner
Isabelle Grieveson	Marine Resources Manager

Regulators

Sean Jamshedi	MMO renewables lead
Audrey Jones	Defra
Maria Militsky	Defra

Project team

Colin Warwick MBE	Workshop chair
Merlin Jackson	Workshop technical adviser
Nathan de Rozarieux	Project manager

Annex 2 – Agenda workshop 2, (2nd March 2022)

Part 1 – Recap – Maximising coexistence through site selection

1. Welcome & Introductions
    - Refresh project aims - Nathan de Rozarieux & Colin Warwick
2. Key findings from Workshop 1
    - The Crown Estate -
    - Offshore renewables -
    - Fishing industry -
3. Identifying best locations within pilot site for towed gears
    - Towed gear skippers to present best areas based on historic activities, fisher knowledge and experience
    - Q and A session

11.15-11.30am Coffee break

Part 2 – Maximising co-existence through site design

4. Mobile gears – design and use
    - Overview of gear used in the area – gear spread, weight, speed etc
    - Fishing gear foot prints from plotter data
    - Manoeuvrability of different gears around obstructions
    - Q and A session

12.30 – 1.15pm Lunch (pasties)

5. Floating windfarm design parameters
    - Anchoring systems – types and spacings
    - Understanding limitations of array design
    - Cabling requirements and limitations
    - Shore connections and cabling
    - Q and A session
6. Round up session
    - General discussion
    - Recommendations

Attendees, workshop 2 (3 March 2022)

Fisheries

Juliette Hatchman	South Western FPO
Antony Hendy	Skipper / owner "Millenia" (trawler)
Tom McClure	Skipper / owner "Harvest Reaper" (trawler)
Chloe North	Western PO
Stephen Nowell (beamers)	Skipper / owner "Elizabeth N, Karen N & Louisa N"
Beshlie Poole	South Devon & Channel Shellfishermen's Association
Alan Scales	Skipper "Angel of Ladram" (beamer trawler)
Mike Sharp trawlers)	Skipper / owner "Emilia Jayne" & "Emily Rose" (beam
David Warwick	Seafish, gear technologist
Scott Wharton	Skipper / owner "Our Olivia Belle" (trawler)

Offshore wind

Courtney French	Orsted
Monica Fundingsland	Equinor
Reinier Zoutenbier	Equinor
Claire Gilchrist	EDF Renewables
Paul Clarke	EDF Renewables
Ian Mc Myn	Ocean Wind
Nicholas Peignet	Ocean Wind
Fatima Vellisco	Ocean Wind
Neil Farrington	Celtic Sea Power

Crown Estate

Sion Roberts	Marine Consents Manager
Juliette Lawson	Marine Planning Intern

Regulators

Sean Jamshedi	MMO renewables lead
Audrey Jones	Defra
Maria Melitisky	Defra

Project team

Colin Warwick MBE	Workshop chair
Merlin Jackson	Workshop technical adviser
Nathan de Rozarieux	Project manager

Annex 3 – Agenda workshop 3, (4th March 2022)

Part 1 – Recap – Maximising coexistence through site selection

1. Welcome & Introductions (10-mins)
    - Refresh project aims - Nathan de Rozarieux & Colin Warwick
2. Key findings from Workshop 1 (15-mins)
    - The Crown Estate -
    - Offshore renewables -
    - Fishing industry -
3. Identifying best locations within pilot site for static gears (30mins)
    - Static gear skippers to present best areas based on historic activities, fisher knowledge and experience
    - Q and A session

10 - 10.15am Coffee break

Part 2 – Maximising co-existence through site design

4. Static gears
    - Overview of static gear used in the area – length / area covered
    - Fishing gear foot prints from plotter data and AIS
    - Deployment of different gears around obstructions
    - Q and A session
5. Floating windfarm design parameters
    - Anchoring systems – types and spacings
    - Understanding limitations of array design
    - Cabling requirements and limitations
    - Shore connections and cabling
    - Q and A session
6. Round up session
    - General discussion
    - Recommendations

1pm Meeting close

Attendees, workshop 3 (3 March 2022)

Fisheries

James Chown	Skipper / owner "Ajax" (offshore netter)
Mike Cohen	NFFO
Juliette Hatchman	South Western FPO
Chloe North	Western PO
Beshlie Poole	South Devon & Channel Shellfishermen's Association
Chris Ranford	Cornish FPO
Mark Rowse	Rowse Fishing Ltd (6 crabbing vessels)
John Walsh	Skipper "Amanda of Ladram"
David Warwick	Seafish, gear technologist

Offshore wind

Courtney French	Orsted
Monica Fundingsland	Equinor
Reinier Zoutenbier	Equinor
Claire Gilchrist	EDF Renewables
Paul Clarke	EDF Renewables
Ian McMyn	Ocean Wind
Nicholas Peignet	Ocean Wind
Fatima Vellisco	Ocean Wind
Neil Farrington	Celtic Sea Power

Crown Estate

Sion Roberts	Marine Consents Manager
Adrian Fox	Head of Engineering (Marine)
Juliette Lawson	Marine planning intern

Regulators

Sean Jamshedi	MMO renewables lead
Audrey Jones	Defra
Maria Melitisky	Defra

Project team

Colin Warwick MBE	Workshop chair
Merlin Jackson	Workshop technical adviser
Nathan de Rozarieux	Project manager