

<b>Meeting Minutes/Action</b>
<b>Meeting Title: Meeting Minutes – Moray Firth Working Group Discussion 12112013</b>
<b>Date / Time / Venue: 12/11/2013 10:30 – 14:30 Mercure Inverness Hotel</b>
<b>Attendees: Attendees: Marc Browne (MB), Peter Moore (PM), Sarah Pirie (SP), Rebecca Radford (RR), Malcolm Morrison (MM), John Watt (JW), John Hermse (JH), John Alexander (JA), Peter Smith (PS), Neil Sutherland (NS), Gareth Jones (GJ), Jay Mackay (JM), George West (GW), Steven Wilson (SW), Glenn Munachen (GM)</b>
<b>Minutes taken by: BMM</b>
<b>Apologies: Colin Warwick, Jonathan Wilson, Roger May, James Reid</b>

Item	Action	Action on	Close out date
Meeting Objectives:			
<ul style="list-style-type: none"> <li>To provide a brief update on new data and fishermen’s register</li> <li>To provide an opportunity to put questions forward to each developments engineers</li> <li>To discuss over-trawlability surveys</li> </ul>			
<b>1.0 – 4.0</b>	<p>Welcome, Apologies, Changes to group membership and sign off meeting minutes.</p> <p>RR stated that there was one change to the agenda; item 6.0 Brief update on new data and fishermen’s register would be moved to the afternoon session to accommodate the engineering discussion.</p> <p>MM updated the group on changes to the membership due to the departure of John Watt Snr from his FIR role. JW will be replacing John Watt Snr as FIR and James Reid will be representing the nephrops fishery on the Working Group. As James Reid was not able to attend the meeting, GW was invited.</p> <p>All agreed that the minutes from the previous Working Group meeting were correct and could be signed off.</p>		
<b>5.0</b>	<p>Actions from previous Working Group meeting.</p> <p>RR went through the actions from the previous Working Group meeting:</p> <ul style="list-style-type: none"> <li>Updates have been made to the Working Group proposal document;</li> <li>Paper documents have been distributed to Working Group members who require them (Peter Smith);</li> <li>The fishermen’s register was distributed to the fishing representatives and Marine Scotland. This is covered in more detail in item 6.0;</li> <li>JH has provided GJ with a list of scallop dredgers for inclusion in ScotMap;</li> <li>SP provided a brief update on guard vessel strategy. As previously discussed, the strategy will take into account the RenewableUK Vessel Safety Guide, the latest draft of which has not yet been published</li> <li>GJ forwarded RR a paper on thermal heating, which RR will distribute to the Working Group;</li> <li>JW will be providing a presentation on over-trawlability surveys. This is covered in more detail in item 10.0</li> <li>SW and GM are attending the meeting to answer questions</li> </ul>	RR to distribute thermal heating paper to the group with the minutes	10 <sup>th</sup> December 2013

	<p>of an engineering nature. This is covered in more detail in items 7.0 and 8.0</p> <ul style="list-style-type: none"> <li>MM provided an update on the SFFs trip to Thanet Offshore Wind Farm</li> </ul>		
<b>6.0</b>	<p><b>Brief update on new data and fishermen’s register</b></p> <p>RR provided a brief update on the new data made available by the MMO (2011 and 2012). Generally there has been little change, although RR provided graphs to show annual changes by fishery.</p> <p>RR and GJ provided an update on the fishermen’s register. RR sent the register to fishing representatives to be updated and then forwarded it to GJ to check against the Marine Scotland register. There was discussion regarding the issues of the register due to the fishing industry constantly changing. It was agreed by all that vessels fishing an area would be checked with fishing representatives 2 months prior to a survey commencing. This will help identify those that may genuinely be impacted by any survey operations.</p>	<p>Development team and RR – Check current fishing activity with fishing representatives 2 months prior to any survey starting</p>	N/A
<b>7.0 – 8.0</b>	<p>Project Updates and Engineers Q&amp;A</p> <p>MB and PM provided brief updates on the BOWL and MORL projects. SW and GM then went into detail regarding specific updates on surveys and answered questions on engineering aspects.</p> <p>MB indicated that BOWL was expecting to obtain consent by December 2013 if not early 2015. All information regarding the recent submission of the ES Addendum as well as the most likely scenario remained the same and until further consent was given further project refinement would be minimal.</p> <p>SW provided a brief overview of the engineering and survey work including the recent UXO and Geotechnical investigation. SW went on to say that the current site investigations should be ending in November with the next phase of investigations taking place Q2 2014.</p> <p>MB mentioned that BOWL had been keeping the industry updated through NTMs and would continue to issue NTMS as and when required.</p> <p>NS asked how close to land is the nearest turbine? BOWL – 12km MORL – 12nm</p> <p>JH asked if the industry would be given the opportunity to input into the grid layout in the next stage.</p> <p>SW highlighted that the number of megawatts each site is going to generate will impact the number of turbines present. Other infrastructure, including met masts and sub-station platforms, will also need to be installed within each site boundary. The layout will be selected based on maximising the economic potential of each development while minimising potential impacts. When a concept is chosen after consent (potentially early next year), the Rochdale Envelope will be refined and a range of stakeholders will be contacted to be made aware of the layout.</p>	<p>Development team to request UKFIM data by method for the Moray Firth from TCE</p> <p>Development team and RR to arrange meetings with fishermen to discuss identifying snagging risks</p> <p>SP to send location of met mast to JH</p>	<p>Early 2014</p> <p>Early 2014</p> <p>10<sup>th</sup> December 2013</p>

SP/MB stated that both developers were hoping to have achieved consent by now (Nov 2013) which is why any layout is indicative. Until the projects are granted consent, they cannot narrow down the Rochdale Envelope. Consent will also provide an indication of what each project is allowed to build, including the number of turbines which will impact on the final layout.

The MCA require the turbines to be positioned in a simplified grid layout for navigational reasons. The potential to alter the layout of each site will therefore be restricted; although it is considered that there will be some flexibility with regards to micrositing (within a 25m radius) although this will require engineering and HSE sign off. Micrositing has been used mainly due to issues with ground conditions that require construction contractors to move negligible distances to allow work to continue. It is recognised however that changes to the layout could result in economic problems for the projects and problems for the construction and operational phases. The Working Group would be notified of the concept layout once a level of project refinement had been undertaken.

Inter-cable routing and turbine micrositing could be discussed with the industry by looking at fishing grounds and selecting routes which minimise impacts. Significant safety risks on fishing vessels would need to be prior to discussions regarding micrositing. It was reiterated that although there may be some flexibility with this process it should be understood that various different aspects would need to be considered.

GJ mentioned that TCE UKFIM data provides accumulated plotter tracks and can be provided by individual fishing methods. This could be useful for showing where high density fishing activity occurs in discrete areas, such as cable routes.

JW stated the need to involve fishermen to identify areas of the seabed that need to be avoided by fishing activity (e.g. wrecks) as if all obstructions are not known then this may impact on fishing being able to resume once the wind farm sites are operational.

SP said that surveys over the site have identified wrecks etc. Can fishermen provide more information than this?

JM answered that what may not be classified as an obstruction the wind farm development, may be to fishing activities.

JW highlighted that fishermen have access to additional information as they record where they have previously snagged during fishing activities.

GJ asked if UKFIM data could be extracted to show snags.

JW replied that the data just shows tracks, it doesn't explain why fishermen have those tracks.

JM stated that different methods have different snags.

SP asked how this information would be obtained.

JH stated that the developers need to meet with fishermen for each

	<p>individual method who has a history of fishing in the area.</p> <p>JM asked what the plans were for construction.</p> <p>SW (BOWL) stated that foundations will be installed in year 1, followed by cables and turbines in year 2. The foundations will protrude above sea level and have navigational lights on them. The construction strategy is subject to refinement, but generally the offshore construction is due to start in 2017 with all other infrastructure being installed in 2018 and finalisation in 2019.</p> <p>NS asked if grounds were considered to be unsuitable for installing turbines, would the sites be extended.</p> <p>BOWL/MORL replied that sites are as defined and cannot be extended. Fewer turbines could be installed, but it depends on the economics. Some areas may not be suitable for piling, however this would be determined by the geotechnical campaigns.</p> <p>PS asked if it could be assumed that turbine locations are known as the borehole locations have been selected.</p> <p>SW indicated that currently selected borehole locations may or may not be suitable for turbines. Current boreholes are used to categorise the site (and generate a ground conditions profile), not select the layout. JW went on to say that the borehole campaign for the layout will begin next year once concepts have been agreed.</p> <p>NS asked what a jacket foundation is.</p> <p>SW explained that jackets are steel structure on the seabed. To keep the structure in position, it will be piled into the seabed by approximately 50m.</p> <p>GJ asked if rock dumping will be required around the base of the turbines.</p> <p>SW answered that it depends on the design selected, for example, jackets do not usually require any scour protection. The current design (for BOWL) does not include any scour protection, however new met-ocean data is indicating that there are higher currents in the area than originally thought so scour protection may be required.</p> <p>PS asked what the lifespan of the turbines is expected to be.</p> <p>SW answered 25 years.</p> <p>GW asked how deep the cables will be buried.</p> <p>SW answered that they would be buried to approximately 1.5m, although this will get less as they get nearer to any infrastructure. It is the aim of the projects to maintain at least 1m burial depth where feasible if not protected.</p> <p>NS asked if seine netting could occur over cables and close to turbines.</p> <p>SW answered that with current knowledge there is nothing to</p>		
--	--	--	--

	<p>indicate that cables will not be buried and if burial is not possible other forms of cable protection will be employed. The absolute depth and length of cable burial will not be able to be determined until later in the design process.</p> <p><b>MORL met mast</b> JM asked what 6,500 tonnes of aggregate required for.</p> <p>GM answered that it is not yet 100% determined how the met mast will be placed on the seabed. It can either be dredged or a rock berm can be used to create a flat surface to place the gravity base on.</p> <p>JM asked if the met mast is present for the life span of the wind farm.</p> <p>GM stated that the met mast has been assessed as part of the overall application. It will provide the opportunity to see how gravity bases work and get data from the site for funding purposes. The original plan was for the met mast to be piled, but there have been issues with the availability of works vessels.</p> <p>GW asked if there is an exact position for the met mast.</p> <p>GM stated that the met mast is located in the middle of the zone.</p> <p>JW stated that a positive of gravity bases is that they can easily be removed, but asked if there is 6,500 tonnes of rock how will it be removed during decommissioning.</p> <p>GM stated that removal of rock dumping will be agreed with Marine Scotland as part of the decommissioning plan prior to removal.</p> <p>JW stated that there have been trials in the Shetlands where scallop dredgers were fishing over a rock dumped area and were picking up large rocks which damaged their catch. This would be a safety concern, particularly for smaller scallop dredge vessels.</p> <p>SP stated that she would send JH the location of the met mast to look at the position compared to the scallop grounds.</p>		
<p><b>10.0</b></p>	<p><b>Over-trawlability surveys</b></p> <p>JW provided a presentation on over-trawlability trials. Trials have previously been undertaken for the oil and gas industry and, to date, have not been undertaken for the offshore renewable industry. The fisheries in the Moray Firth are different to those found in the North Sea where these trials have been undertaken previously. There is a wider diversity of vessels of different sizes targeting various species in the Moray Firth. If clay berms are left on the seabed after the installation of a pipeline or cable, then there is the potential for vessels to trawl this clay up, resulting in damaged catch. Many small clay berms have the same potential to lead to damage as larger berms. There is also potential for objects to be dropped and not recovered or reported, resulting in potential snagging risks for fishing vessels.</p> <p>JW went on to explain that the over-trawlability surveys work by creating 'gates' along the route of a recently installed cable or pipeline. The gates are ½km wide and located in key fishing areas</p>		

Meeting Minutes – Moray Firth Working Group Discussion 121113

	<p>(hotspots). Vessels tow chain mats which can both break up clay berms and recover dropped objects. Pairs of gates take approximately 2 days to create. Gates allow fishing to resume in an area while other areas of the cable may remain closed to fishing activities. In the first instance, it would be necessary to identify key fishing areas by looking at fishing tracks for each method. Trials will need to be done in different areas due to the different fishing grounds in the Moray Firth. Problem areas would need to be identified first then gate locations can be selected.</p> <p>GM noted that cable laying generally results in better backfill compared to oil and gas installations.</p>		
<p><b>11.0 – 13.0</b></p>	<p><b>Proposals for next meeting, AOB and date of next meeting</b></p> <p>It was agreed that proposals for and the date of the next meeting will be decided nearer the time as both projects are waiting for consent and this will impact upon what will be discussed.</p> <p>JH asked for a drop box to be set up to allow easy access to meeting documentation.</p> <p>GW asked if there will be compensation for any gear that gets damaged.</p> <p>SP stated that MORL are currently having discussions with the SFF regarding this. JW noted that there is a claim fund available in the oil and gas industry which funds repairing/replacing damaged gear if the damage cannot be attributed to a particular company or the claim is disputed. There have been discussions at the FLOWW meetings regarding this.</p> <p>MB mentioned that any such incidence would be looked at on a case by case basis and although the oil and gas do operate a compensation fund the offshore wind industry as a whole did not. Therefore the approach to such issues would be on a developer by developer basis although did not prevent separate company's agreeing a suitable approach with the relevant organisations.</p> <p><b>Next steps</b></p> <p>It was agreed that there will be separate meeting to discuss fishing activities and inter-array cable routes and turbine layout. This will be progressed through the SFF. MORL and BOWL will provide coordinates of their sites and met masts in WGS84 format to JW.</p> <p>JH asked if scallop gear trials have been progressed. PM stated that they are aiming for next summer but separate discussions outside the remit of this group are required.</p> <p>MM voiced his disappointment that a representative from MSLOT was not present at the meeting. RR mentioned that Roger May had been invited but was unable to attend due to other commitments. MM asked if the caseworker could be present at meetings from now on. GJ to ask for a representative from MSLOT to attend future meetings.</p>	<p>RR to set up drop box</p> <p>RR, development team and SFF to progress meetings</p> <p>Development team to forward coordinates to JW</p> <p>GJ to request a representative from MSLOT to attend future meetings</p>	<p>10<sup>th</sup> December 2013</p> <p>Early 2014</p> <p>10<sup>th</sup> December 2013</p> <p>Prior to next meeting</p>

**Date of next meeting:** TBC

**Minutes prepared by:** Rebecca Radford

**Appended Documents:** Presentation Slides and Thermal Heating Paper

**Internal Distribution:** Marc Browne, Sarah Pirie, Peter Moore, Jonathan Wilson

**External Distribution:** Malcolm Morrison, John Watt, John Hermse, John Alexander, Peter Smith, Neil Sutherland, Roger May, Gareth Jones, Colin Warwick, Jay Mackay, George West, Steve Wilson, Glenn Munachen, James Reid