

## MORAY FIRTH RENEWABLES ADVISORY GROUP (MFRAG) MEETING MINUTES

<b>Meeting</b>	MFRAG Main Group	
<b>Date</b>	8 May 2019	
<b>Location</b>	SNH, Battleby	
<b>Attendees</b>	Scottish Association for Marine Science (SAMS)	Ben Wilson (BW) [Chair]
	Marine Scotland Licensing and Operations Team (MS-LOT)	Giulia Agnisola (GA) [conf. call]
	Marine Scotland Science (MSS)	Jared Wilson (JW)
	Marine Scotland Planning and Policy (MS-PP)	Paul Smith (PS)
	Scottish Natural Heritage (SNH)	Erica Knott (EK), Chris Eastham (CE) [conf. call]
	Royal Society for the Protection of Birds (RSPB)	Charles Nathan (CN) [conf. call]
	Fisheries Management Scotland	Keith Williams (KW)
	Beatrice Offshore Windfarm Limited (BOWL)	Joseph Deimel (JD)
	Moray Offshore Windfarm (East) Limited (Moray East)	Sarah Pirie (SP), Catarina Rei (CR)
<b>Apologies</b>	Whale and Dolphin Conservation (WDC)	Fiona Read (FR), Sarah Dolman (SD),
	Fisheries Management Scotland	Allan Wells (AW)
	Marine Scotland Planning and Policy (MS-PP)	Janelle Braithwaite (JB)
<b>Actions</b>	<ol style="list-style-type: none"> <li>1. CR to issue combined comments received on the current Terms of Reference (ToR) from the MFRAG group to the group for comment / approval as soon as possible. Feedback requested in two weeks.</li> <li>2. JD to confirm timescales for provision of reports on the post-construction monitoring surveys.</li> <li>3. JD to provide details on the approach for monitoring marine growth, including monitoring of invasive species.</li> <li>4. PS to provide details of the Marine Invasive Species group to the MFRAG group.</li> <li>5. JD to organise a MFRAG-MM meeting as soon as possible to discuss BOWL's marine mammal post-construction monitoring proposals.</li> <li>6. JD to organise a MFRAG-O meeting as soon as possible to discuss BOWL's ornithology post-construction monitoring proposals.</li> <li>7. JD to discuss with SNH the best way forward on the funding of the "puffin-cam" monitoring.</li> <li>8. Moray East to submit herring survey report to MS-LOT for approval.</li> </ol>	

- 9. JW to discuss lack of progress on the publication of the diadromous evidence map with at the next ScotMER meeting and provide update to group via email.
- 10. JB to provide an update on the ScotMER work via email to the MFRAG group.
- 11. BW to send an email to the MFRAG group with background information on the INSITE programme.
- 12. MFRAG secretariat to issue Doodle poll with potential dates for next MFRAG meeting (possibly November 2019).

**1. Introductions & Meeting Objectives**

Introductions.

**3. Review of Minutes of Meeting (MoM) from Last Meeting**

- Actions from meeting of the 29 Nov 2018:
- 1. Group members to provide comments on current version of Terms of Reference (ToR) to the secretariat by the 13 December 2018 – CR confirmed a number of MFRAG group members had provided comments on the ToR and that a combined version with all the comments received had been created, but that this document had not been shared with the group yet. CR to issue document to the group for review.
  - 2. JD/CR (MFRAG secretariat) to share MFRAG-MM minutes with main group – Completed.
  - 3. MSS to organise meeting on salmonid proposals with Marine Scotland, Vattenfall (Aberdeen Offshore Wind Farm) scientific panel, the Dee and the Don District Salmon Fishery Boards (DDDSFB) and Moray East – Completed. MS-LOT, MSS, AST and Moray East attended the meeting with the River Dee DFSB. The River Dee DFSB confirmed that they were very supportive of the AST study and felt it was worthwhile work, but it was unlikely that there would be any opportunities for combining the studies.
  - 4. Secretariat to include a list of abbreviations within MFRAG MoM – Completed. List of abbreviations added to the meeting minutes template.
  - 5. BOWL and Moray East to explore the possibility of undertaking joint post construction cod and sandeel surveys – Completed. To be discussed in detail under agenda item 3.2
  - 6. PS to circulate Janelle’s contact (ScotMER) – Completed.
  - 7. Secretariat to contact Janelle for updates on ScotMER – Completed. JB invited to attend current meeting. Unfortunately on this occasion she was not able to attend. JB will continue to be invited to future MFRAG meetings.
  - 8. JD to issue Doodle poll with potential dates for next MFRAG meeting (May 2019) – Completed. Current meeting.

<b>Actions</b>	<p><b>1. CR to issue combined comments received on the current Terms of Reference (ToR) from the MFRAG group to the group for comment / approval as soon as possible. Feedback requested in two weeks.</b></p>
<b>3.1 BOWL Project Update</b>	
<p>JD provided an overview of the main construction milestones, including:</p> <ul style="list-style-type: none"> <li>- WTG transfer of custody – 66 out of 84</li> <li>- WTG energised – 79</li> <li>- O&amp;M base – Thomas Stevenson building conversion nearly complete.</li> </ul> <p>EK enquired about when all the WTGs would be fully installed. JD noted it was difficult to predict timescales with precision, but that two months are currently being considered for full WTG installation and commissioning.</p>	
<b>3.2 BOWL PEMP Update</b>	
<p>JD provided a summary of the monitoring currently planned for BOWL’s post-construction / operational phase.</p> <p><u>Subsea surveys:</u></p> <p>Subsea surveys will consist of:</p> <ul style="list-style-type: none"> <li>- Marine growth;</li> <li>- Scour monitoring; and</li> <li>- Other surveys for technical reasons.</li> </ul> <p>JD noted that targeted surveys for monitoring marine growth had been scheduled for this summer (2019). Discussions are still ongoing with potential contractors on the detailed scope of work. The tolerance of structures to marine growth will be taken into account while designing the surveys. Other aspects being considered are how to deal with deposits on the seabed following the “cleaning of substructures” of marine growth.</p> <p>EK enquired if contractors would be analysing the marine growth to take into account invasive species. JD noted that that this was an issue still being discussed with contractors.</p> <p><u>Marine Mammal Monitoring:</u></p> <p>During 2018 and 2019 BOWL have investigated a number of innovative techniques for monitoring during operational activities, including the potential for mounting sensors on jacket structures and crew transfer vessels, and use of crew transfer vessels as mobile monitoring platforms. Unfortunately following extensive discussions and site meetings with vessel operators, engineering teams and equipment suppliers, these techniques have been found not to be practical.</p>	

Therefore, BOWL’s proposal would be to carry out a similar monitoring effort as during the pre-construction period. The budget allocated for the post-construction would be of a similar order but BOWL would like to understand the advice from the group on the scope of the work.

EK and JW queried if the monitoring questions for the post-construction phase would be the same as the pre-construction phase and suggested that the monitoring requirements should be discussed with MFRAG-MM subgroup.

Benthic Surveys:

Benthic surveys will be undertaken during 2020 following a similar approach to that followed during the pre-construction surveys.

Cod & Sandeel Surveys:

BOWL and Moray East have discussed the possibility of undertaking joint post-construction cod and sandeel surveys. Both projects have conditions that state that post-construction surveys should be undertaken a minimum of 12 months following full commissioning of the wind farm. Therefore there are no constraints for delaying surveys. Given Moray East’s current construction timescales the earliest the surveys would take place is 2023 (assuming full commissioning of the Moray East Offshore Wind Farm in February 2022).

If joint surveys proceed then the survey methodology would be agreed with MFRAG prior to surveys taking place.

Ornithology Surveys:

Aerial surveys – aerial surveys are due to start this month (to be carried out by HiDef) and will follow the same methodology as in 2015.

Puffin-cam – BOWL would like to support the continuation of the puffin camera surveys trialled by SNH in 2018. The preferred approach would be to fund SNH to carry out the work given their experience / knowledge of the site and the surveys scope.

JD noted that these would be the only ornithology surveys currently proposed for the post construction phase.

JW enquired about the great back-backed gull tagging. There was a commitment pre-construction that gull tagging would be undertaken post-construction.

JD replied that he was not aware that gull tagging was still a requirement and EK noted that SNH’s position was that the 2014 survey undertaken by Moray East and BOWL was not enough to confirm no connectivity between the SPA and the wind farms (due to the small sample size).

EK and JW recommended that ornithology survey requirements should be discussed within an MFRAG-O meeting.

<b>Actions</b>	<ol style="list-style-type: none"> <li><b>2. JD to confirm timescales for provision of reports on the post-construction monitoring surveys.</b></li> <li><b>3. JD to provide details on the approach for monitoring marine growth, including monitoring of invasive species.</b></li> <li><b>4. PS to provide details of the Marine Invasive Species group to the MFRAG group.</b></li> </ol>
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5. JD to organise a MFRAG-MM meeting as soon as possible to discuss BOWL’s marine mammal post-construction monitoring proposals.
6. JD to organise a MFRAG-O meeting as soon as possible to discuss BOWL’s ornithology post-construction monitoring proposals.
7. JD to discuss with SNH the best way forward on the funding of the “puffin-cam” monitoring.

#### 4.1 Moray East Project Update

CR provided an update on main project milestones since November. These were:

- UXO removal campaign completed. Ongoing analysis of underwater noise data collected.
- Marine Coordination Centre (Fraserburgh) in operation.
- Pre-construction compliance main activities completed (Notices to Mariners, Notice to Airmen, UKHO communications, vessel reports, etc)
- All offshore wind farm pre-construction consent plans now approved.
- All pre-construction surveys completed (cod & sandeel surveys undertaken in Feb & Mar 2019).
- Marine mammal monitoring kit deployed in Moray East site and wider Moray Firth, start of harbour seal and bottlenose dolphin photo ID surveys.
- Start of HDD preparation works.
- Piling template incorporated in piling vessel at Invergordon.
- Piling works due to start very soon.

With regards to construction programme CR noted that only minor updates to the programme had been made since the last meeting. Only activities planned in 2019 are piling and HDD works at landfall. Although the programme notes a duration of HDD works of approximately 6 months, CR noted that offshore works would be of very short duration – only a few days for each of the three HDDs.

Full commissioning is expected during Feb 2022.

Construction updates and other project information can accessed through <http://www.morayoffshore.com/moray-east/the-project/>.

#### 4.2 Moray East PEMP Update

SP provided an update on Moray East’s environmental monitoring.

##### Cod and Sandeel Surveys:

The Moray East pre-construction cod and sandeel surveys were undertaken between 27 Feb and 26 May. There sandeel survey tows and sediment grabs were undertaken separately which allowed greater flexibility for identifying suitable weather windows for the sediment grabs. This approach was agreed with MS-LOT.

Both surveys were completed prior to the UXO detonation campaign.

Herring Surveys:

Herring surveys were carried out between 6 Aug and 28 Sep 2018. Both the IHLS data (2014 and 2015) and Moray East survey data provide support to the general trend that larger larvae are recorded in the southwest and smaller larvae are recorded to the northeast. This is also consistent with BOWL’s 2014-2015 herring surveys which indicate that spawning occurs to the north of the Moray Firth (around Orkney) and beyond the predicted piling noise contour lines (Coul *et al.*). The herring report is currently being finalised and is scheduled to be submitted for approval by the end of May.

Salmon Monitoring:

All equipment has now procured and the marine and river receivers have been deployed.

Smolt tagging is underway. KW confirmed that 800 salmon and 50 sea trout tagged had now been tagged.

The next steps will be to recover the receivers at the end of the migration period, download and analyse the data. Reporting is scheduled for early 2020.

SP noted that it is likely that a large amount of data will be collected and there is some concern that there will not be enough resource to analyse the data.

All agreed that it was good to see a project of this scale progressing, and that it was really good news that all the required funding had been secured.

KW noted that the diadromous fish evidence map had not been finalised yet and that the last meeting was held over two years ago. Also, it would have been good to understand how this project fits in the wider National Strategy and he was concerned as this is an issue that has been highlighted before and had not been resolved. There is no forum for discussion of these issues or agreement on methodologies of these strategic projects can be resolved to. EK agreed that it would not be appropriate to discuss the Diadromous Fish National Strategy under ScotMER.

EK noted that the offshore research only re-started due to offshore renewables.

SP queried whether a scientific panel could be created to advise the salmon project although it is understood this already happens on a more informal basis. KW confirmed that the concern was broader than that and that he was highlighting the need to join up these types of studies with the National Strategy / ScotMER more strategically. SP queried whether JB could help identify routes for funding for the next / future phases of the project (e.g. data analysis). SP confirmed that it was important if developers were to continue participate in strategic monitoring / research such as this project or ORJIP etc that they can see that participation reduces their risk either for current or future projects and therefore buy-in from regulators and advisors is key.

Marine Mammal Monitoring:

CR noted that the marine mammal monitoring kit (CPODs and noise recording equipment) had now been deployed in the Moray East site and wider Moray Firth in preparation for the start of piling activities.

The first harbour seal photo ID surveys and the boat-based bottlenose dolphin surveys had also taken place.

MMO, PAM and ADD operators have been appointed by Moray East (marine mammal mitigation) and will operate on board of the piling vessel (Apollo).

<b>Actions</b>	<b>8. Moray East to submit herring survey report to MS-LOT for approval.</b>
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	<p><b>9. JW to discuss lack of progress on the publication of the diadromous evidence map with at the next ScotMER meeting and provide update to group via email.</b></p>
<p><b>5. Strategic Research</b></p>	
<p><u>ScotMER:</u></p> <p>It was noted that JB had been invited to the MFRAG meeting but unfortunately she was not able to attend this meeting. PS suggested that JB could provide an update on the ScotMER work via email to the group.</p> <p><u>INSITE stage 2:</u></p> <p>BW provided an update on INSITE stage 2.</p> <p>The purpose of the INSITE programme is to interrogate OSPAR 983, specifically to study the impact of structures in the North Sea. There will be a meeting on Friday (10 May 2019) to discuss the kick-off of the second round of projects as part of this programme. BW will be in attendance and will send an email to the group after the meeting with background information about the programme.</p> <p><u>ORJIP stage 2:</u></p> <p>CR provided an update on ORJIP stage 2.</p> <p>CR noted that a final agreement has now been reached between all participants and that the contract should be signed very soon. The kick off of ORJIP is scheduled for Jun 2019.</p> <p>ORJIP stage 2 will count with 12 participants, including developers and statutory agencies (e.g. Marine Scotland). There is a strong Scottish participation with most Scottish offshore wind developers having committed to ORJIP stage 2. Updates on ORJIP projects will be provided at future MFRAG meetings for information.</p>	
<p><b>Actions</b></p>	<p><b>10. JB to provide an update on the ScotMER work via email to the MFRAG group.</b></p> <p><b>11. BW to send an email to the MFRAG group with background information on the INSITE programme.</b></p>
<p><b>6. AOB</b></p>	
<p>No AOB discussed. Next meeting to be organised for later in 2019.</p>	
<p><b>Actions</b></p>	<p><b>12. MFRAG secretariat to issue Doodle poll with potential dates for next MFRAG meeting (possibly November 2019).</b></p>

<b>List of Abbreviations</b>	
ADD	Acoustic Deterrent Device
AST	Atlantic Salmon Trust
BOWL	Beatrice Offshore Windfarm Limited
DSFB	District Salmon Fishery Board
HDD	Horizontal Directional Drilling
MMO	Marine Mammal Observer
MoM	Minutes of Meeting
Moray East	Moray Offshore Windfarm (East) Limited
MFRAG	Moray Firth Regional Advisory Group
MFRAG-MM	Moray Firth Regional Advisory Group – Marine Mammals Subgroup
MFRAG-O	Moray Firth Regional Advisory Group – Ornithology Subgroup
MS-LOT	Marine Scotland Licensing and Operations Team
MSS	Marine Scotland Science
MS-PP	Marine Scotland Planning and Policy
ORJIP	Offshore Renewables Joint Industry Programme
OSP	Offshore Substation Platform
O&M	Operations and Maintenance
PAM	Passive Acoustic Monitoring
PEMP	Project Environmental Monitoring Programme
RSPB	Royal Society for the Protection of Birds
SAMS	Scottish Association for Marine Science
ScotMER	Scottish Marine Energy Research (previously SpORRAn)
SNH	Scottish Natural Heritage
SpORRAn	Scottish Offshore Renewables Research Framework (now ScotMER)
ToR	Terms of Reference
WDC	Whale and Dolphin Conservation
WTG	Wind Turbine Generator