

MORAY FIRTH RENEWABLES ADVISORY GROUP (MFRAG) MEETING MINUTES

Meeting	MFRAG Main Group	
Date	29 November 2018	
Location	Marine Scotland, 375 Victoria Road, Aberdeen	
Attendees	Scottish Association for Marine Science (SAMS)	Ben Wilson (BW) [Chair]
	Marine Scotland Licensing and Operations Team (MS-LOT)	Gayle Holland (GH)
	Marine Scotland Science (MSS)	Adrian Tait (AT), Andronikos Kafas (AK)
	Marine Scotland Planning and Policy (MS-PP)	Paul Smith (PS)
	Scottish Natural Heritage (SNH)	Erica Knott (EK), Chris Eastham (CE)
	Royal Society for the Protection of Birds (RSPB)	Charles Nathan (CN) [conf. call]
	Fisheries Management Scotland	Alan Wells (AW) [conf. call], Keith Williams (KW) [conf. call]
	Beatrice Offshore Windfarm Limited (BOWL)	Liz Reynolds (LR), Joseph Deimel (JD)
	Moray Offshore Windfarm (East) Limited (Moray East)	Sarah Pirie (SP), Catarina Rei (CR), Holly Best (HB)
	Royal Haskoning DHV	Fiona Moffatt (FM)
	Brown & May Marine (BMM)	Jen Miller (JM)
	Atlantic Salmon Trust (AST)	Matt Newton (MT), Mark Bilsby (MB)
Apologies	Whale and Dolphin Conservation (WDC)	Fiona Read (FR), Sarah Dolman (SD)
Actions	<ol style="list-style-type: none"> Group members to provide comments on current version of Terms of Reference (ToR) to the secretariat by the 13 December 2018. JD/CR (MFRAG secretariat) to share MFRAG-MM minutes with main group 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. Secretariat to include a list of abbreviations within MFRAG MoM. BOWL and Moray East to explore the possibility of undertaking joint post construction cod and sandeel surveys. PS to circulate Janelle's contact (ScotMER). Secretariat to contact Janelle for updates on ScotMER. JD to issue Doodle poll with potential dates for next MFRAG meeting (May 2019). 	

1. Introductions & Meeting Objectives	
Introductions.	
2. Terms of Reference (ToR) and New Chair	
<p>The new MFRAG Chair was introduced to the group.</p> <p><u>Terms of Reference:</u></p> <p>CR explained that ToR V5 is the one available on the Marine Scotland website. Changes confirmed as required are for references to SpORRAn (Scottish Offshore Renewables Research Framework) to be updated to ScotMER (Scottish Marine Energy Research) and for group member list to be updated.</p> <p>SP suggested that current timescale for issue of meeting minutes to group for review (2 weeks) is unrealistic. JD was in agreement that the current timescales were extremely difficult to meet. SP proposed a 2 week target for issue of Actions, with 4 week target for issue of minutes for review. – All in agreement with proposed amendments to timescales for issuing meeting minutes.</p> <p>CR highlighted that the ToR were now out of date and that they would need to be updated. At the previous meeting it was suggested that comments should be sent to MS-LOT however the group was unsure about the status of this action. It was agreed that the secretariat, with support from BW, would collate all comments and would issue a revised version to the group for final review / approval. All to send comments to the secretariat within two weeks of meeting.</p>	
Actions	1. Group members to provide comments on current version of ToR to the secretariat by the 13 December 2018.
3. Review of Minutes of Meeting (MoM) from Last Meeting	
<p><u>Actions from meeting of the 22/02/2018:</u></p> <ol style="list-style-type: none"> 1. ALL to provide comments by end of March 2018 to MS-LOT (Giulia Agnisola). – discussed under agenda point item 2. Ongoing action to amend ToR. 2. BOWL to submit results of Marine Mammal construction monitoring during Q1 /Q2 2018– Completed. 3. MS-LOT to check if BOWL salmon monitoring report is available within MS website – Completed. 4. Moray East to contact BOWL prior to carrying out herring surveys to enquire about any access restrictions within the BOWL site boundary which may affect the Moray East herring survey sampling design. – Completed – Moray East was in touch with BOWL to discuss access restrictions relevant to herring survey. 	

5. Moray East to propose an amended survey design in case of access restrictions to the BOWL site and seek approval from MS-LOT – Completed – amended survey design approved by MS-LOT. Surveys now complete. Preliminary results to be discussed under agenda item 5.2.
6. Moray East to submit Project Environmental Monitoring Programme (PEMP) to MS-LOT for consultation with relevant stakeholders – Completed – Moray East now approved and available within MS website.
7. MFRAG Secretariat to share MFRAG-MM MoM with FMS and RSPB – CR/JD will ensure this happens. Available MFRAG-MM MoM now within MS website.
8. ID 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 – Ongoing, MSS to check status.
9. MFRAG secretariat to organise date for next meeting (potentially August) – Completed – current meeting.

CR proposed that 2 meetings per year is sensible target, agreement from group. CN requested that any useful information arising between meetings be circulated to group, including minutes from sub-group meetings.

BW requested that MoM have first use of acronyms written in full to ensure wider understanding of the discussions as the MoM are to be made publicly available within the MS website.

Actions	<ol style="list-style-type: none"> 2. JD/CR (MFRAG secretariat) to share MFRAG-MM minutes with main group 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. 4. Secretariat to include a list of abbreviations within MFRAG MoM.
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4.1 BOWL Project Update

LR and JD gave summary update of construction progress and implementation of O&M.

BOWL marine mammal monitoring report presents full results and is available in ‘Strategic Marine Mammal Monitoring Programme Annual Report 2018’ (shared with the MFRAG-MM members previously).

4.2 BOWL PEMP Update

JD described initial post-construction survey proposals (2019), including:

- Aerial bird surveys (repeat of 2015 pre-construction surveys)
- Marine mammal monitoring (methodologies being finalised with University of Aberdeen)
- Subsea surveys (survey programme guided by engineering requirements)

5.1 Moray East Project Update

SP highlighted the following main project milestones achieved since the last MFRAG meeting:

- Contract for Difference (CfD) milestone delivery met in Oct 2018 – This was when Moray East demonstrated significant financial commitments to meet the CfD contract requirements.
- All EPCI contracts now signed.
- The UXO surveys are ongoing (to be completed during January 2019).
- Fraserburgh has now been confirmed as the main construction and O&M base.
- All the 2018 pre-construction surveys now complete, with only outstanding pre-construction surveys to take place in early 2019 (cod and sandeel). Moray East's pre-construction marine mammal monitoring was completed in conjunction with BOWL's pre-construction monitoring.
- The onshore construction works are ongoing (start of works during September 2018).
- Moray East's offshore construction work is planned to start with Horizontal Directional Drilling (HDD) works at export cable landfall, starting from the onshore terminus in April 2019.
- Pile installation planned for Q2 2019 (May 2019).
- Jacket and OSP installation planned for Q2/3 2020.
- WTG installation planned for 2021, with full commissioning in January 2022.

Project layout optimisation is ongoing; 100 WTGs and 3 OSPs.

SP noted that the DSLP and LMP will be updated prior to construction. All other consent plans have taken the full possible layout (112 possible turbine locations) into account, which will be updated with the final (reduced) layout before the start of construction.

Outstanding plans to be submitted include the Cable Plans (Wind Farm and offshore transmission infrastructure, OfTI) and the O&M Plan which will follow later.

5.2 Moray East PEMP Update

CR provided an update:

- Moray East's PEMP and Environmental Management Plan (EMP) were approved by MS-LOT in October 2018.
- Addendum on construction Marine Mammal Monitoring Programme (MMMP) approved by MFRAG-MM and MS-LOT in September 2018.
- Pre-construction aerial surveys (birds and marine mammals) completed. The survey report will be discussed in detail during the next MFRAG-O meeting (29 November 2018), however it has been found that the seabird abundance and distribution in the survey area was similar to that seen in previous surveys.
- Ongoing discussions with MS-LOT regarding cod and sandeel survey methodologies.
- Herring larvae survey completed in September 2018 with analysis of results ongoing.

- Ongoing development of strategic salmon monitoring proposals.

JM provided further information on fish monitoring:

- Herring larval survey completed (August/September 2018).
- Cod and sandeel surveys will be carried out in Q1 2019.
- Cod survey will use an otter trawl with a 20mm blinder at 8 sampling locations. However Moray East would prefer to use a 40 mm blinder to reduce catch rates, if accepted by MS-LOT, SNH and MSS. Sample analysis will include the identification of cod (length, sex and spawning condition) and by-catch.
- Sandeel survey will use a modified shellfish dredge and mini Hamon grab. Different sample analyses will be carried out for the dredge and the grab. Data analysis will include identifying sandeel and bycatch species and distributions, and sediment type and distribution.

AK queried how the survey locations had been selected.

JM explained that survey areas for cod and sandeel were determined by Moray East's consent conditions, and the sampling station locations attempt to replicate the 2012/13 Moray East surveys.

EK asked whether there was potential for Moray East and BOWL to carry out joint post-construction surveys for cod and sandeel. This could have cost saving benefits and potential to reduce survey by-catch. This would also avoid any crossover with BOWL undertaking post-construction surveys during Moray East construction. To be discussed at the next MFRAG meeting.

AT queried if there was a risk of baseline fish surveys overlapping with UXO surveys. JM indicated that Moray East's initial approach for consideration would be to, where possible, have a two week gap between UXO detonation and fish surveys to minimise influence on surveys. JM asked for feedback on this approach.

EK commented that the two week period seemed potentially very long and may place unnecessary constraints on both activities. Moray East undertook to consider this further in the final methodology confirming that the final survey report would be able to highlight any detonations that took place within the survey period at a minimum.

HB highlighted that when a UXO is identified, it becomes a hazard. If the UXO cannot be avoided it must be detonated. The Development area is not likely to have high density of UXO based on preliminary studies.

HB added that UXO targeted geophysical surveys have been carried out. ROV or divers would be used for the detailed UXO inspections when required.

MN enquired if BMM had been involved in fish surveys in UXO areas.

JM replied that yes, BMM had been previously involved in similar surveys. However there is very limited literature to support the design of fish surveys around UXO surveys. Moray East undertook to consider this further in the final methodology confirming that the final survey report would be able to highlight any detonations that took place within the survey period at a minimum. *Post meeting note: The timing of the UXO clearance campaign is taken into consideration in the cod and sandeel methodologies which were submitted in January 2019 to MS-LOT.*

JM provided an update on the herring larval survey, which was completed in Aug/Sept 2018. The surveys focused on larval size and spatial abundance of Orkney and Shetland stock within the Moray Firth, using a high-speed plankton sampler.

Survey report will be issued to MS-LOT in early 2019. The preliminary survey results align with those found in the BOWL survey.

MN gave a presentation on the Atlantic Salmon Trust (AST) smolt tracking work:

- This built on the work undertaken along with the BOWL study, which tracked smolts to 30 km from shore. The current AST study which Moray East is co-funding will tag smolts in seven different rivers and monitor out to 70 km from shore in the Moray Firth. The project will be tagging up to 850 fish. Predator tags are being trialled; these change signal when the smolt is being digested.
- Loss rates of smolts in different aquatic zones along their migratory pathways will be considered; are there regional survival/behavioural differences?
- Hydrophone arrays will be set up in a way that avoided high intensity fishing zones; splitting the outer array seemed to be the best option.
- Smolts to be caught and tagged from mid-April into May.

AK asked who own the tags and receivers.

MN explained that the tags are one-use only.

MN noted that the current survey timetable is to deploy in March and retrieve equipment in July/Aug 2019. The equipment to be used is from Canada, and is follows the standard specifications for this type of survey.

AW highlighted that Fisheries Management Scotland have been working closely with AST on this proposal. AW asked whether the tracking work would be happening at the same time of Moray East’s piling and whether there may be impacts on fish hearing from piling?

MN replied that piling is unlikely to impact on study as noise from piling will probably be attenuated over the monitoring distances.

AT asked if the HDD work could affect the study. Although smolt may not come close enough to shore to be affected. MN replied that there are no data for HDD noise in water and that it would be best to proceed with study and see what happens.

BW asked if there was potential interaction with the monitoring work on marine mammals as monitoring kit is due to be deployed in the southern Moray Firth.

MN undertook to speak with Paul Thompson to coordinate with marine mammal monitoring.

MN noted squid fisheries in southern Moray Firth often lead to losses of monitoring kit.

BW concluded that this was an impressive survey, and would be good to tie in with other monitoring activities if possible.

Actions	5. BOWL and Moray East to explore the possibility of undertaking joint post construction cod and sandeel surveys.
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6. Strategic Research

AK gave an update on ScotMER:

- The fish and fisheries receptor group have published evidence maps and there is budget; may use for statistical monitoring of spawning areas etc of commercially impacted fish species, to start in April/May 2019.
- Will use budget now for short-term graduate/student placements to undertake literature reviews and produce draft project proposals. Discussing with the Marine Alliance for Science and Technology for Scotland (MASTS).
- ScotMER fish and fisheries symposium in Oct 2019, which will showcase small projects, will provide a good guide to the direction of MSS research.

EK noted that ScotMER projects funding update for 2018/19 includes projects to map *Sabellaria* in Scottish waters, and for acoustic tracking of salmon. EK suggested contacting Janelle from MS-PP for further details on ScotMER.

EK provided a SNH research update:

- A project looking at acoustic attenuation techniques will be reporting soon.
- Will support ScotMER going forward.
- Setting up workshops with consultants and developers on SNH guidance.
- Also have a project for Scotland-wide visual assessments of offshore turbines of different heights.

JM added that there is also Carbon Trust project on piling impacts on herring.

CR provided an update on the Offshore Renewables Joint Industry Programme (ORJIP). ORJIP Phase 2 is still being set up. The programme currently has 9 partners including developers. Would be financed by interested parties. CR will provide further updates next MFRAG meetings.

EK noted that The Crown Estate and Crown Estate Scotland are also looking at enabling actions and would suggest the group follows developments.

Actions	<p>6. PS to circulate Janelle’s contact (ScotMER).</p> <p>7. Secretariat to contact Janelle for updates on ScotMER.</p>
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7. AOB

Agreed that next meeting would be May 2019. A Doodle poll will be issued soon to select a date. Meeting could potentially be held in Dundee (Location TBC), or Perth (Battleby).

Actions	<p>8. JD to issue Doodle poll with potential dates for next MFRAG meeting (May 2019).</p>
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List of Abbreviations	
ADD	Acoustic Deterrent Device
AIS	Automatic Identification System
AST	Atlantic Salmon Trust
BMM	Brown and May Marine
BOWL	Beatrice Offshore Windfarm Limited
CfD	Contract for Difference
cMMMP	Construction Marine Mammal Monitoring Programme
EMP	Environmental Management Plan
HDD	Horizontal Directional Drilling
JNCC	Joint Nature Conservation Committee
MASTS	Marine Alliance for Science and Technology for Scotland
MMMP	Marine Mammal Monitoring Programme
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
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
SNSOWF	Southern North Sea Offshore Wind Forum

SpORRAn	Scottish Offshore Renewables Research Framework (now ScotMER)
ToR	Terms of Reference
UoA	University of Aberdeen
WDC	Whale and Dolphin Conservation