

Forth & Tay Regional Advisory Group
Marine Mammal Subgroup
Wednesday 2rd December 2015, 11:10 – 15:00
The Scottish Government, Victoria Quay – Edinburgh

Final minutes – issued Thursday 11th February 2016

Present:

- Ian Davies (Chair) *ID* (MSS)
- Ewan Edwards *EE* (MSS)
- Fiona Read *FR* (WDC)
- Sonia Mendes *SM* (JNCC)
- Catriona Gall *CG* (SNH)
- Fiona Manson *FM* (SNH)
- Nick Brockie *NB* (SSE - Seagreen)
- Esther Villoria *EV* (ICOL – Inch Cape)
- Sarah Arthur *SA* (ICOL – Inch Cape)
- Nancy McLean (Sec) *NM* (Natural Power – Inch Cape)
- Ewan Walker *EW* (Mainstream – NnG)
- Phil Bloor *PB* (Pelagica - NnG)
- Robert Main (on phone) *RM* (MSS)

Apologies: Kate Brookes (MSS)

Agenda

A draft Agenda had been circulated with invites for the meeting. The aims of the meeting were:

1. Introductions, apologies
2. Actions from previous meeting
3. Piling Mitigation
 - Summary of Beatrice Offshore Wind Farm Limited (BOWL) Piling Strategy requirements and logic behind this
 - Current regulator/advisor views on mitigation
 - Implications for Forth and Tay projects
4. Monitoring Methods
5. Summary of actions for the next meeting
6. AOB

2. Actions from previous meeting

Actions **AP1**, **AP2**, **AP3**, **AP6**, **AP11**, **AP13**, **AP14** and **AP15** were all discharged before the meeting.

AP4: RM to co-ordinate with Marine Scotland Licensing Operations Team (MS-LOT) so he is notified when the Moray Firth Regional Advisory Group (MFRAG) documents and information is made available, and can then inform the FTRAG-MM group. This will be an on-going action.

AP5: KB to provide a list of all reports to be published shortly on marine mammals under Scottish Government funding. This action was discharged. However, the status of some of the documents was provided as submitted to ministers for approval. KB will provide an update to the group when these documents have been approved and are ready for distribution.

Actions **AP7**, **AP9** & **AP10** were discussed in the context of post consent survey requirements, and are minuted within the relevant discussions below.

AP8: KB to establish an opinion on the value and resource implications of the number of C-POD locations in the East Coast Array and/or the potential for deployment of C-PODs over winter (related directly to the ability to detect change in bottlenose dolphin behaviour during piling events). This action was carried over to this meeting. EE will undertake the action, to report to the group by Christmas. *Post meeting note: EE completed in email of 08/01/2016 to the group.*

As an up-date to the existing C-POD array information that has been deployed for the summer months and most of Autumn, the C-PODs have been recovered for the winter. Deployment was successful for April-Nov 2015, with a summer service trip, although some equipment was lost. If deployment were to be considered for a full winter season, the moorings would need to be re-designed / re-ballasted as they are not currently heavy enough for winter.

Cost of the equipment is estimated at £12k per C-POD, half of which is the acoustic release (required for the deployment and subsequent recovery of the C-PODs). Deployment and retrieval costs are 'minimal' through use of the Marine Scotland vessel.

AP12: KB to organise a data gap review for behavioural responses in seals from piling noise. Following dissemination of this review, the FTRAG-MM would then discuss opportunities, appropriateness and funding mechanisms to help fill any data gaps for grey seal / seal species. This action was carried over to this meeting. This action would include consideration of the recent papers from Hastie *et al.* with regards to piling impacts in The Wash.

A table of actions and their status is provided as Appendix A.

Discussion regarding ToR and the recently consented Hywind Project¹

The group discussed the Hywind Project consent conditions which require Hywind to participate in FTRAG. The relevant conditions are:

Condition 3.2.1.4: *"The Licensee must participate in the FTRAG established by the Licensing Authority for the purpose of advising the Licensing Authority on research, monitoring and mitigation programmes for, but not limited to, non-native species, ornithology, marine*

¹ <http://www.gov.scot/Topics/marine/Licensing/marine/scoping/Hywind>

mammals and commercial fish species. Should a Scottish Strategic Marine Environment Group ("SSMEG") be established (refer to condition 3.2.1.5), the responsibilities and obligations being delivered by the FTRAG will be subsumed by the SSMEG at a timescale to be determined by the Licensing Authority."

Condition 3.2.1.1 Project Environmental Monitoring Programme (PEMP) states: "All initial methodologies for the above monitoring must be approved, in writing, by the Licensing Authority and, **where appropriate**, in consultation with the Forth and Tay Regional Advisory Group ("FTRAG"), referred to in condition 3.2.1.4 of this licence."

A discussion was held as to the appropriateness of inclusion of the Hywind Project in the FTRAG MM sub-group, given the foundation technology² (suction caissons) and the number of turbines (five) to be deployed at the Hywind site. There was general agreement that inclusion of the Hywind Project into the FTRAG MM sub-group may not be appropriate, and that any inclusion would require an up-date to the ToR.

AP16 ID to clarify with MS LOT the intention of condition 3.2.1.4 of the Hywind consent. ID to seek clarity from MS-LOT on the process for inclusion of future projects in the FTRAGs i.e. how will it be determined if a project should be included and how will they be joined into the group.

AP17 Once the intention of Condition 3.2.1.4 has been clarified, Developers to provide a position statement with regards to the appropriateness of inclusion of the Hywind Project into the FTRAG MM sub-group.

AP18 SA to discuss with MS LOT the possibility of having a representative from the MS-LOT team at each FTRAG MM subgroup meetings either in person or by phone if they cannot attend in person.

3. Piling Mitigation

Discussions were held by those present at the meeting with regards to:

- The rationale and details of mitigation proposal developed for the initiation of impact piling proposed by MORL and BOWL (Appendix D of the BOWL Piling Strategy³); and
- The process resulting in the licence conditions imposed upon the BOWL Project by MS-LOT⁴ with regards to the mitigation proposal.

Following these discussions, the key recommendation made to Developers by MSS and SNH was to consider undertaking a similar risk assessment for the Forth and Tay wind farms, utilising the methodology described in Appendix D of the BOWL Piling Strategy.

AP 19 FTRAG Developers are to consider undertaking a risk assessment to calculate the potential (unmitigated) risk of injury/fatality to marine mammals from the first piling strike. If appropriate, they will present a methodology for discussion at the next FTRAG-MM meeting. Alternatively, Mainstream may have a piling strategy for NnG ready for discussion at the next meeting.

During the meeting, JNCC indicated that they will be reviewing their best practice guidelines

² <http://www.windpoweroffshore.com/article/1374435/statoil-selects-anchor-contract-hywind-scotland>

³ <http://www.gov.scot/Resource/0049/00490632.pdf>

⁴ <http://www.gov.scot/Topics/marine/Licensing/marine/scoping/Beatrice/piling/PS-discharge-letter>

on seismic activity, pre-piling mitigation, MMO training and PAM guidelines/standards. They have money for a one year post, and are starting with a review of guidance on seismic surveys. They are not yet able to confirm time-scales for a review of guidance on pre-piling mitigation.

4. Monitoring methods

From the last meeting, it was agreed that species to be considered for monitoring of effects were:

- Bottlenose dolphin;
- Grey seal; and
- Harbour seal.

Bottlenose dolphin:

The group confirmed that the aim of any monitoring would be to detect changes in fecundity and survivability of the Bottlenose Dolphin (BND).

EW informed the group of the outcome of the discussion he had had with Carol Sparling of SMRU Consulting with regards to photo ID of BND (**AP7**). The aim of this survey methodology would be to monitor potential displacement of BND from the Firth of Tay to the Moray Firth during piling activity in the construction phase of the Firth of Forth and Tay Projects. Carol suggested that in order to achieve survey results that could provide evidence either for, or against, this displacement, baseline data would need to be very robust to allow difference against background variation to be established. This robustness could be obtained by a high frequency of ID surveys throughout the year.

The stakeholders felt that the existing baseline would provide information on current reproduction rates of the SAC population (number of calves produced by recognisable females) in order to detect change. Given this, it should be possible to match photo ID in the Firth of Tay with that carried out in the Moray Firth to link cause and effect.

AP8 detailed above will provide information as to whether the existing CPOD array of 10x3 locations⁵ has or should provide a robust enough baseline from which to detect change in distribution/vocalisation during piling activity.

AP 20: EE to provide a literature search on the use of photo ID to establish fecundity and survivability rates in BND. Action to be completed by Christmas. *Post meeting note: EE completed in email of 07/01/2016 to the group.*

AP21: SNH to establish ball park figures for how much photo ID work in the Firth of Tay might cost. *Post meeting note: CG addressed this in emails of 17/12/2015 and 18/01/2016.*

AP22: Funding requirement for the photo ID work in the Moray Firth associated with the Moray Firth monitoring programme may now be publically available to inform the discussion. EE to provide information if it is available. *Post meeting note: EE has confirmed costs are not publically available.*

AP23: EW to provide paper on 'Predicting the effects of human developments on individual dolphins to understand potential long-term population consequences', Pirotta et al 2015. *Post meeting note: This paper has been distributed to the group.*

AP24: FR to provide link to Monica Arso Civil's PhD on the NE BND population. *Post meeting note: This has been distributed to the group⁶. SM has also confirmed that this publication*

⁵ <http://www.gov.scot/Resource/0042/00426891.pdf>

provides the information on BND vital rates that she was referring to.

Grey seal:

Discussions with regards to monitoring requirements for grey seals were delayed until the outcome of **AP 12** above.

Harbour Seal

The conclusion of the discussion on harbour seal monitoring from the first FTRAG-MM meeting was that if changes in the fecundity and survivability rates of harbour seal in response to piling related effects were to be studied, studies would be best concentrated upon the harbour seals of the Moray Firth. This is because this population is currently in growth and is well-studied with a robust baseline (confidence in estimated population parameters). The Forth of Tay supports one known haul out for appreciable numbers of harbour seals, but a robust baseline is lacking for this haul out.

ID reported (discharge of **AP10**) that MS LOT were in agreement in principle to contribution to the Moray Firth monitoring campaign as appropriate discharge of monitoring requirement for harbour seal, if the FTRAG-MM considered this appropriate.

The point was made that the harbour seals in the Firth of Tay have habituated to the SMRU boats and all vacate the haul outs when the vessels approach. This would make tagging of Firth of Tay animals very problematic.

A discussion was held with regards to the practicalities of contributing to any monitoring in the Moray Firth due to timescale considerations and respective construction timelines.

Developers have organised a meeting to discuss **AP9** (to discuss the option of collaboration with the Moray Firth marine mammal studies, and potential implications / routes to involvement to establish feasibility) in the latter half of December 2015. They will report back to the group at the next meeting. *Post meeting note: The east coast developers have provided clarity on their position to the group in an email of the 17th of December.*

AP25: FM to provide the group with the report detailing the outcome of the SMRU 2014 Scottish harbour seal surveys. This has been distributed to the group. *Post meeting note: This has been distributed to the group⁷.*

AP26: Developers are to provide their position with regards to contribution to the Moray Firth monitoring programme to PB before Christmas. PB to then collate and discuss with the developers. A final position paper will be distributed to the group. *Post meeting note: Email from Ewan Walker on 17/12/2015 to clarify position of all NnG, ICOL, SeaGreen, MORL and BOWL with regards to undertaking joint impact monitoring.*

Harbour porpoise

The group discussed the review of harbour porpoise survey work undertaken to monitor displacement effects from piling of offshore wind farm foundations conducted by PB. The group agreed with the conclusion that the most effective monitoring method utilised to date was C-POD deployment. And with the conclusion that the harbour porpoise are likely to be displaced to just outside the 'noisy' area (ie increased harbour porpoise detections just outside where the detections are reduced in number). The group also felt that evidence exists that once construction activity had finished, harbour porpoise were likely to return to the wind farm site if there was an attractive food source present for them.

⁶ <https://research-repository.st-andrews.ac.uk/bitstream/10023/6543/6/MonicaArsoCivilPhDThesis.pdf>

⁷ http://www.snh.org.uk/pdfs/publications/commissioned_reports/869.pdf

SCANS III is partially funded. The survey will utilise aerial survey methodology, with funding achieved in the main part by 'in kind' provision of resource and equipment.

The group agreed to minute that they did not consider harbour porpoise a priority species for the monitoring strategies for the Firth of Forth and Tay projects.

AP27: ID to take this position to MS LOT in order to establish their position on this agreement with regards to consent monitoring requirements. The proposal is that the FTRAG Projects do not undertake harbour porpoise monitoring, but that they concentrate on monitoring other species.

AP28: NM to ensure that noise monitoring requirements is added to the agenda of the next FTRAG-MM meeting. JNCC wish to discuss the opportunity to tailor the noise monitoring undertaken so that representative turbine installations are monitored rather than, for example, the first four installations. An example of such a strategy may be to record the noise propagation from installation requiring the (a) lowest, (b) most representative, (c) highest blow energy predicted to be required or (d) location most likely to cause noise propagation into ecologically sensitive areas.

AP29: SA to send round doodle poll for next meeting. This meeting is likely to be the end of February. *Post meeting note: This action has been completed. Next meeting confirmed for the 25th of February at Victoria Quay, Edinburgh.*

Appendix A: Cumulative actions and action status for the FTRAG-MM sub-group.

Action Point	Responsible	Requirement	Status
1	RM	RM to finalise the ToR and ensure comments from FTRAG ornithology group are incorporated into FTRAG-MM ToR. In order to achieve this, members of the FTRAG-MM group are to provide any comments (not already provided) to RM on the current ToR by the 28 th of August.	Concluded via email of the 9th of August 2015.
2	NM	NM to receive named representatives for FTRAG-MM by the 28th of August.	Completed.
3	RM	RM to circulate link for relevant Marine Scotland web pages to FTRAG-MM.	Completed on 1st of December.
4	RM	RM to co-ordinate with MS-LOT so he is notified when MFRAG documents and information is made available, and can then inform the FTRAG-MM group.	On-going action.
5	KB	KB to provide a list of all reports to be published shortly on marine mammals under Scottish Government funding.	Sent out via email by NM on the 10th of August 2015.
5(a)	KB	The status of some of the documents was provided as submitted to ministers for approval. KB will provide an up-date to the group when these documents have been approved and are ready for distribution.	On-going action.
6	PB	PB to provide the Quick 2014 report on the photo-ID work in the Firth of Tay to NM, who will distribute to the group.	PB sent out via email on 25th of August 2015.
7	EW	EW to talk to SMRU with regards to establishing a second opinion on the ability of the photo-ID surveys to detect change in individual animal survivability and fecundity, and whether the current survey design is sufficiently robust to detect change during and post construction.	See minutes from FTRAG MM meeting of the 3rd of December.
8	KB	KB to establish an opinion on the value and resource implications of the number of C-POD locations in the East Coast Array and/or the potential for deployment of C-PODs over winter (related directly to the ability to detect change in bottlenose dolphin behaviour during piling events).	See Action 8(a).
8(a)	EE	This action was carried over to the 2nd MM meeting. EE will undertake the action, to report to the group by Christmas.	Completed in email of 08/01/2016

9		The Developers to discuss the option of collaboration with the Moray Firth marine mammal studies, and potential implications / routes to involvement to establish feasibility. This participation would only be for species of common interest for construction monitoring surveys, and would reflect the availability for animals for survey and likelihood of surveys being able to detect change within the Firth of Forth and Tay.	Email regarding the position of the east coast developers was provided to the FTRAG-MM on the 17 th of December (see action point 26).
10	ID	ID to discuss with MS-Licensing and Policy to establish if there is scope for sharing of studies in the manner in the discharge of consent conditions for non-linked projects.	See minutes from FTRAG MM meeting of the 3rd of December
11	KB	KB to circulate SCOS report for 2014 – link below	Provided in minutes.
12	KB	KB to organise a data gap review for behavioural responses in seals from piling noise. Following dissemination of this review, the FTRAG-MM would then discuss opportunities, appropriateness and funding mechanisms to help fill any data gaps for grey seal / seal species.	See Action 12(a).
12(a)	EE	This action was carried over to this meeting. EE will undertake the action, to report to the group by Christmas. This action would include consideration of the recent papers from Hastie et al. with regards to piling impacts in The Wash.	
13	NnG	The NnG team to undertake a review on available harbour porpoise noise impact studies, summarise what surveys have been conducted, the conclusions arising from the studies and undertake a gap analysis with regards to information that may be viably obtained with the Firth of Forth and Tay.	To be emailed out by Sarah Arthur with agenda for second meeting.
14		Developers to establish the preferred date for the next meeting, as close to late September as possible – but bearing in mind time requirements for the action points above.	2nd of December 2015.
15	NM	NM to issue a doodle poll to define where and when the next FTRAG-MM subgroup meeting will be held.	SA has taken on the role of meeting organiser.
16	ID	To clarify with MS LOT the intention of condition 3.2.1.4 of the Hywind consent. ID to seek clarity from MS-LOT on the process for inclusion of future projects in the FTRAGs i.e. how will it be determined if a project should be included and how will they be joined into the group.	

17	Developers	Once the intention of Condition 3.2.1.4 has been clarified, Developers to provide a position statement with regards to the appropriateness of inclusion of the Hywind Project into the FTRAG MM sub-group.	
18	SA	Discuss with MS LOT the possibility of having a representative from the MS-LOT team at each FTRAG MM subgroup meetings either in person or by phone if they cannot attend in person.	
19	Developers	FTRAG Developers are to consider undertaking a risk assessment of likelihood of animals being within the 500m mitigation zone for the piling activities of the FTRAG projects. If appropriate, they will present a methodology for discussion at the next FTRAG-MM meeting. Alternatively, Mainstream may have a piling strategy for NnG ready for discussion at the next meeting.	
20	EE	To provide a literature search on the use of photo ID to establish fecundity and survivability rates in BND. Action to be completed by Christmas.	Completed following the meeting. Email on 07/01/2016
21	SNH	To establish ball park figures for how much photo ID work in the Firth of Tay might cost.	Completed following the meeting. CG has confirmed that SNH contribution doesn't constitute full price (emails of 17/12/2015 and 18/01/2016). Suggests that SMRU be contacted directly.
22	EE	Funding requirement for the photo ID work in the Moray Firth associated with the Moray Firth monitoring programme may now be publically available to inform the discussion. EE to provide information if it is available.	Completed following the meeting. EE has confirmed costs are not publically available.
23	EW	To provide paper on 'Predicting the effects of human developments on individual dolphins to understand potential long-term population consequences', Pirotta et al 2015.	Completed following the meeting.
24	FR	To provide link to Monica Arso Civil's PhD on the NE BND population. Post meeting note: This has been distributed to the group	Completed following the meeting. See minute for web link

25	FM	To provide the group with the report detailing the outcome of the SMRU 2014 Scottish harbour seal surveys. This has been distributed to the group.	Completed following the meeting. See minute for web link.
26	Developers	Developers are to provide their position with regards to contribution to the Moray Firth monitoring programme to PB before Christmas. PB to then collate and discuss with the developers. A final position paper will be distributed to the group.	Completed following the meeting. Email from Ewan Walker on 17/12/2015
27	ID	To take this position to MS LOT in order to establish their position on this agreement with regards to consent monitoring requirements. The proposal is that the FTRAG Projects do not undertake harbour porpoise monitoring, but that they concentrate on monitoring other species.	
28	NM	NM to ensure that noise monitoring requirements is added to the agenda of the next FTRAG-MM meeting. JNCC wish to discuss the opportunity to tailor the noise monitoring undertaken so that representative turbine installations are monitored rather than, for example, the first four installations.	
29	SA	SA to send round doodle poll for next meeting. This meeting is likely to be the end of February.	Confirmed for 25 th of February at Victoria Quay, Edinburgh