

MORAY FIRTH RENEWABLES ADVISORY GROUP (MFRAG) ORNITHOLOGY SUB-GROUP MEETING MINUTES

Meeting	MFRAG-Ornithology (MFRAG-O)	
Date	1 st October 2021	
Location	Teams call	
Attendees	Marine Scotland Science (MSS)	Jared Wilson (JW), Tom Evans (TE), Julie Miller (JM)
	NatureScot	Erica Knott (EK), Chris Eastham (CE), Kate Thompson (KT)
	Marine Scotland Licensing and Operations Team (MS-LOT)	Gayle Holland (GH)
	Marine Scotland Policy	Janelle Braithwaite (JBr)
	Joint Nature Conservation Committee (JNCC)	Julie Black (JB)
	BOWL	Joseph Deimel (JD), Fiona
	Moray East	Ruaridh Danaher (RD)
	Moray West	Catarina Rei (CR), Nuria Abad Oliva (NA)
	MacArthur Green (Moray West Ornithology Advisor)	Ross McGregor (RM)
	MacArthur Green (BOWL Ornithology Advisor)	Mark Trinder (MT)
Apologies	Royal Society for the Protection of Birds (RSPB)	
Action Number	Action	Completion Date
1	Provide an update on actions from MFRAG-O meetings prior the next meeting	Prior MFRAG-O meetings
2	RD to provide MT with Moray East construction activities during April, May & June 2021.	TBC
3	JD to provide reporting timescales in relation to puffin camera monitoring	TBC
4	MacArthur Green (MT and RM) to prepare a monitoring options paper to assess the potential options to combine the various aerial survey requirements across the 3 developments going forward.	TBC
5	Moray West to produce a note describing the cost-benefit analysis of 1.5 cm versus 2 cm and circulate to MFRAG-O group towards the end of October 2021.	End October 2021
6	Review the study on catching seabirds at sea published by the Dutch Government and make contact with the author	TBC

7	Workshop to be arranged in relation to GBBG monitoring work	TBC
8	TE to investigate how offshore tagging could be addressed through ScotMER.	TBC
9	MSS to request summary report of the issues encountered by BTO during the work on GBBG tagging in the Isle of May	TBC
10	Moray West to discuss with MS-LOT requirements to discharge consent condition in relation to GBBG monitoring.	TBC
Date of Next Meeting	Date TBC via Doodle poll	

1. Introductions and Purpose of Meeting

Introductions made.

2. Review of Minutes of Meeting from previous meeting (9th February 2021)

Status of Actions from previous meeting:

1. MT to explore option for writing a paper linking findings from BOWL postconstruction monitoring with similar post construction monitoring (similar method) carried out for East Anglia One to determine if similar results. - **On-going** - MT noted he was planning on discussing the BOWL results at the Conference on Wind Energy And Wildlife Impacts (CWW) next Spring (Apr-22). EK stated that the RAG would like to receive a note on how monitoring will be discussed at conferences. MT committed to notify the group in case of any updates on the scope of the CWW Conference presentation on BOWL's results.
[MT post meeting note: only data already in the public domain will be presented].
2. NatureScot and MSS to agree caveats to be included with BOWL 2019 post-construction aerial survey report before report is made available on MS-LOT - MFRAG website. Timeline for this to be agreed following issuing to MFRAG of final report version (incorporating comments). – **Completed** – It was agreed at the last MFRAG-O meeting that some text should be added to RAG webpage. This has now been added.
3. BOWL to contact Maarten Platteeuw - Rijkswaterstaat to request information on results from boat-based gull catching carried out in The Netherlands – to understand what worked / didn't work. – **BOWL is currently focusing on the on-land catching and tagging due to safety concerns with catching at sea, but will follow up this action if this situation alters.**
4. MT to discuss BTO Special Methods licence requirement with appointed tagging sub-contractor. – **To be discussed at this MFRAG-O meeting**
5. BOWL to have discussions with MSS about their BTO contract to train weak-link harness deployers. – **To be discussed at this MFRAG-O meeting**

6.	Moray West to look into including a discussion on the power analysis for the survey design, in the aerial survey methodology – Completed .
7.	BOWL (MT) to share the report Responses Log with NatureScot – Completed .
8.	MT to ensure the changes made to the report are clearly explained in the comments log. – Completed .
9.	JD to contact JM and MT about the possibility of joining a meeting with BOWL management to explain the WTG operational data requirement for monitoring data analysis - Superseded
10.	MSS to confirm if BOWL's 2019 aerial survey report should go through peer review or third party validation. – Action to be followed up after year 2 data is provided. This action was discussed at this MFRAG-O meeting.
11.	Developers to confirm data sharing conditions – Completed . Data sharing agreed between the three developers.
12.	Moray West to provide clarification on ranking of species for monitoring and to provide information about the pros and cons of designing surveys primarily for gannet rather than kittiwake in an updated survey note – Completed .
13.	NatureScot and MSS to provide feedback on Moray West's updated surveys note within one week – Completed .
Actions	1. Provide an update on actions from MFRAG-O meetings prior the next meeting.
3. Moray East Project	
3.1 Moray East project update	
<p>RD provided a project update.</p> <p>OEC and IAC are fully installed, and 100 WTG installed.</p> <p>Key milestones:</p> <ul style="list-style-type: none"> - First power generated – June 2021 - Installation of the last WTG – September 2021 - Commissioning and takeover will take place in December 2021 - Final commissioning of the WTG – on-going until April 2022 <p>RD mentioned that Moray East PEMP includes the requirement to undertake post-construction aerial surveys for Moray East the 3 first years of operational phase. The scope for the first year of post-construction surveys will need to be discussed in the MFRAG-O meetings.</p> <p>MT noted that BOWL aerials surveys were carried out in May, June and July 2021. MT noted that he will be in touch with RD to enquire about what activities were on-going at Moray East around the survey dates/times, so it can be taken into account in the analysis for BOWL survey data.</p>	
Actions	2. RD to provide MT with Moray East construction activities during April, May & June 2021.
4. BOWL Project	

4.1 BOWL project update

JD provided a provided a project update.

- On-going site maintenance
- OFTO handover took place in August 2021 (BOWL's OFTO is called TCP). BOWL do not have ownership of the export assets. TCP will be represented at MFRAG through attendance at some meetings of MFRAG-main group.

With regards to environmental monitoring, JD noted the following:

- Benthic surveys – undertaken during summer;
- Cod surveys – undertaken in early 2021, but concluded after the previous meeting;
- Puffin camera monitoring – a trial of the technology was undertaken at the Isle of May. The lessons learned from the trial will be used during next year's monitoring at East Caithness Cliffs SPA. BOWL has discussed with the landowner adjacent to the puffin colony previously identified for monitoring (as trialled by SNH and MSc student in 2018), and they have permission to set up a camera 50 m from the puffin colony. The proposed observation point is located 500 m of the farm complex, which has electricity/power supply, and the landowner would be happy to run a power cable to the camera location.

It is proposed that a camera will be installed at this location for the 2022 breeding season, as a test phase for a full deployment for the 2023 breeding season.

TE enquired about timescales for reporting. JD replied the timescales had not been defined yet

JW mentioned that the metrics should be agreed before summer trial commence, as an indication of success of the trials.

JW asked who would be undertaking the image processing, and whether data would be accessible. JD explained that processing will be carried out by a BOWL/SSE contractor (Avanade). Data accessibility discussions have not yet commenced.

- Aerial surveys - JD explained that BOWL 2021 aerial surveys were successfully completed. One of the July surveys had to move into early August.

JD noted that the data from the surveys in May and June have been received from HiDef and data processing is ongoing for the final surveys.

Actions

3. JD to provide reporting timescales in relation to puffin camera monitoring once these have been defined.

4.2 BOWL 2021 Digital Aerial Surveys

TE highlighted the benefit of having coordinated surveys across all developments. Coordinated approach would need input from all developers.

JD noted that BOWL would need to know by January 2022 if post-construction surveys for year 3 would need to be done in 2022.

CR highlighted that Moray West would do surveys next year (2022), gathering data for Moray Firth in 2022. Moray East would also need to do post-construction surveys in next year. If MFRAG considers that there is value to also postpone the Moray East 1st year post-construction, then we could pause this for a year.

EK mentioned that it is important to understand what surveys and when are being done each project, and to consider activities on-going. How info will be received from surveys and what info is required at long term.

CR noted that when Moray West produced pre-construction aerial surveys methodology note a map was including showing all developments survey area as well as a review of the data collected in terms of the spatial coverage, and this should be used for this. The unknown point is the requirement for post-construction.

JW – looking at the area and turbines, rather than individual projects. Combine transects, and open up options to combine surveys.

JD suggested that MacArthur Green (MT and RM) could prepare an options paper. MT confirmed that MacArthur Green could focus on producing an option paper.

EK/JW noted that surveys further into the project lifespans (such as in 10 years' time) would establish any longer-term changes such as habituation over time.

EK agree

TE noted that he agrees with EK.

RD mentioned that the Moray East is working with the assumptions that next year would be undertaking aerial surveys and that they would need to be planned soon, should these be paused while the strategic paper is being produced?

EK – it would be good that Moray East works with the assumption to do surveys next year (2022).

RD noted that Moray East would progress with undertaking their post-construction surveys in 2022.

EK noted that other post-construction monitoring results would be available from other schemes.

Actions	4. MacArthur Green (MT and RM) to prepare a monitoring options paper to assess the potential options to combine the various aerial survey requirements across the 3 developments going forward.
----------------	---

5. Moray West Project

5.1 Moray West project update

NA provided a Moray West project update.

Main updates were as follows:

- Section 36 Consent Variation Application: Consultation closed and gap analysis on-going.
- Site Investigations 2021
 - Geotechnical works are due to commence mid-October
 - Geophysical surveys - On-going & due to be completed mid-October.
- Pre-construction Monitoring Surveys on-going
- Drafting Consent Plans for submission late 2021/early 2022

Actions

None

5.2 Moray West Pre-Construction Digital Aerial Surveys

NA provided an update on the Moray West Pre-construction aerial surveys.

Surveys were due to commence in March, as agreed in the Method Statement, however, due to weather this was not possible and first survey was carried out on 2nd April.

The October survey is still to be completed, which will be the last survey of 2021. The pre-construction aerial surveys will then reassume in March 2022.

NA explained that Moray West survey transects overlap with the installations within Beatrice Oil Complex. Repsol Sinopec UK requested Moray West to respect and maintain certain airspace restriction over the Beatrice complex, which is flying over 2,000 feet, (approx. 640 meters of altitude).

Since the first surveys, Moray West has continued engaging with Repsol Sinopec UK in order to ease the restrictions. However, Moray West have carried out all 2021 surveys respecting the airspace restriction requested by Repsol, in order to complete these in the most safely possible manner.

NA explained that as a result, the imagery has been collected within the overlap area with Beatrice complex is at 2 cm resolution rather than 1.5 cm (only for the imagery collected within the overlap area with Beatrice complex), noting that for species of interest this would not have an impact on identification rates (previous surveys for Moray East and West were conducted at 2 cm GSD).

CR explained that Moray West has engaged with Repsol Sinopec regarding these restrictions, with the aim to ease these.

RM noted that the difference between the two resolutions (2 cm and 1.5 cm) is minor, and the important point is that APEM ensures the same coverage.

JB noted that this should be considered at post-construction monitoring, ensuring that the different resolutions are comparable.

TE noted need to consider potential influences of the presence of the Beatrice Oil Complex installations on bird behaviour when analysing the survey data.

KT highlighted it would be helpful for the MFRAG-O group to see the results from pre-construction surveys year 1, to have an opportunity to review the data and to discuss again. Important to consider if the same coverage and detection rates.

CR noted that Moray West has not yet received all the data from the surveys, and that analysis time will need to also be considered. Therefore there may not be time to analyse the year 1 results prior to next year's surveys commencing. CR also noted that the ease of the airspace restrictions has not yet agreed with Repsol Sinopec.

RM noted that the 2 cm resolution has been standard for the last 5 years, and the 1.5 cm has been a recent improvement, and it is a small difference. In terms of detection rates difference, it is suspected that this would also be minor. RM added that the difference on ID rates resulting from the imaginary resolution would not have any significant effect in determine displacement.

JW summarised that it is important to understand the risk associated with using 2 cm resolution from Moray West survey area overlapping with Beatrice complex, to decide whether is worth requesting Repsol Sinopec UK to ease the airspace restrictions; and if we were to switch to 1.5 cm across the whole Moray West survey area from pre-construction surveys year 2, what the implications would be.

RM mentioned that there will be a minimum clearance for installed turbines.

Actions	5. Moray West to produce a note describing the cost-benefit analysis of 1.5 cm versus 2 cm and circulate to MFRAG-O group towards the end of October 2021.
----------------	--

6. Moray Firth GBBG monitoring proposal

Note: 3 recent feasibility reviews have been produced which are informing discussions on GBBG monitoring, these:

- East Caithness Cliffs SPA great black-backed gull: survey of catching opportunities 17/08/2021. BOWL/MacArthur Green
- East Caithness Cliffs SPA – great black-backed gull capture opportunities MFRAG-O briefing note 25/08/2021. BOWL/MacArthur Green.
- Moray West great black-backed gull pre-construction monitoring proposed approach. Briefing note 21/09/2021 issued to MFRAG-O on 27/11/2021.

GBBG monitoring requirements:

Moray West has a requirement for pre-construction GBBG monitoring and will need to take place in 2022. It is proposed that lessons learnt from 2014 tagging survey would be applied.

During 2014 tagging surveys, accessible areas for tagging were identified.

MT noted that some locations further north (and therefore more relevant to BOWL) were identified, but these were not accessible. MT explained that 2021 bait trails failed, and it could be because the birds were not expecting to find food in that location, and they might need to be habituated first.

MT noted that if the GBBG cannot be caught on land, there are no other options. The baiting trails could be done for a longer term, for example, over a course of few weeks in order to build up the interest of the birds on these baiting locations.

MT highlighted that Ewan Wakefield would not be available for the next year or two, and therefore is unlikely that he would be involved in any potential at-sea tagging activities going forward. MT do not know anyone else in the UK with similar field experience, and it would be essential to find the right personnel to carry out this work.

JW asked whether anyone knows personnel that has successfully caught gulls at sea.

RM mentioned that there are a group in Europe that have caught gulls at sea, but not large gulls, and highlighted that GBBG are very difficult to catch at sea.

TE suggested to contact Maarten Platteeuw, as he does trials catching gulls at sea, but it is also his understanding that these trials have not been successful

CE asked whether there would be an opportunity to catch GBBG from the jackets, if the birds were found to use the jackets.

JD noted that the vessels undertaking the over trawl surveys took some photos of gulls, but there was no sign of GBBG on site. JD also highlighted that it would be very unlikely to gain access to the jackets in order to catch gulls, as only personnel with the right training would be allowed to access the jackets and only for the purpose of maintenance works.

JB asked whether there are alternative options if catching GBBG at sea is not feasible.

TE mentioned a study published from the Dutch Government about opportunities and constraints catching gulls at sea.

https://www.noordzeeloket.nl/publish/pages/185079/quickscan_catching_gulls_at_sea_final_version_rippen_et_al_1.pdf

JW concluded that offshore tagging may not be a task to be done by a Developer.

JB suggested it could be undertaken as part of the ECOWind programme.

EK noted that this topic could be considered in ScotMER. TE took an action to look on how this could fall within ScotMER.

JW mentioned that the target would be the SPA connectivity.

RM suggested to carry out baiting trials in 2022 at the locations identified in 2014 surveys and see what can be achieved. RM also noted that the key constraint is for Moray West to carry out pre-construction monitoring next year.

Other alternatives to at sea tagging discussed were:

MT suggested that birds could be followed from shore with a telescope (although it was noted that it is not possible to follow a bird far from shore).

JBr mentioned that a potential alternative could be the use of drones. JW noted that the issue with using drones is the very short battery life.

EK suggested colour-dyeing birds.

KT suggested that some additional work could be done in parallel to baiting trials in 2022, in case baiting trials failed, and try to do some follows at the same time on the northern part of the SPA.

JB highlighted the effects of the tags.

JW advised that BTO did some GBBG tagging at the Isle of May during 2021, and results showed the reproductive failure rate on tagged birds was much higher (than non tagged) and therefore the team is now looking into investigating if this resulted from the handling and/or the attachment of the tags.

JD raised concerns on the possible impacts on birds resulting from tagging.

RM mentioned that Canadian groups have been working on tagging birds. JW mentioned that BTO have been in contact with the Canadian group and similar issues resulting from tagging were raised.

CR mentioned that in 2014 the tags did not use harness. CR also suggested that in order to minimise the impact on individual birds, Moray West could support BTO work on the Isle of May.

EK noted that the work carried out in the Isle of May might not continue next year.

TE suggested a workshop with people working on using tags in harness on GBBG. TE also mention that different tags should be considered, for example, tags placed on the birds' tails, or other alternative tagging methods.

JW noted that it would be worth querying to BTO for a summary report on the issues encountered.

RM recommended that the GBBG tagging work is then paused until the work being carried out by BTO is finalised.

MT mentioned that the handling issues are not resolved with the use of a different tags, and it would be recommended to take the option of tagging work off the table until there is more information from BTO.

CR mentioned that Moray West could contribute to the baiting trial in 2022 instead of tagging to discharge Moray West pre-construction monitoring requirement

GH mentioned that this opinion would be appropriate for Moray West pre-construction monitoring in 2022.

An action was taken for GH and CR to discuss offline Moray West GBBG monitoring requirements to discharge consent condition.

JW summarised the discussions on GBBG monitoring work

- Workshop to be organised with people working on GBBG monitoring (tagging).
- No tagging will be carried out by developers (for foreseeable future), and an alternative monitoring plan to be developed for 2022.
- Summary report of the issues encountered during GBBG tagging in the Isle of May will be requested from BTO by MSS
- If the work on the Isle of May continues next year, developers could potentially participate/contribute towards it.

Actions	<ol style="list-style-type: none"> 6. Review the study published by the Dutch Government and make contact with the author 7. TE to investigate how offshore tagging could be addressed through ScotMER. 8. Workshop to be arranged on GBBG monitoring 9. MSS to request a summary report of the issues encountered by BTO during the GBBG tagging work in the Isle of May 10. Moray West to discuss with MS-LOT requirements to discharge consent condition in relation to GBBG monitoring.
7. Strategic Work Updates	
<p>CR provided an update on developer's strategic involvement. OW is involved in various ORJIP projects.</p> <p>JD also mentioned that SSE is also involved in ORJIP.</p> <p>JBr mentioned the following R&D projects:</p> <ul style="list-style-type: none"> - Petrel and shearwater base line data – focused on the west coast; being tendered under ScotMer - Mapping tool for bird sensitivity – stage 2 for integration into CEF on-going under ORJIP - Sectoral marine planning roadmap - Compensation measures study – looking at how to assess potential compensation measures. - Migratory routes – draft will be shortly available - BTO study - GPS data and nocturnal activity – data on flight speeds and flight heights. Draft report will be shortly available 	
Actions	<p>None</p>
8. AOB and close	
<p>JD noted the recent events on auk mortality (late Aug/Sep carcasses were found along the coast).</p> <p>JW explained that CEH and Cefas are looking at different drivers for the auk mortality events. Could possibly be related to food availability.</p> <p>EK mentioned that these events could be connected with the cetacean stranding events that have recently occurred.</p> <p>JB noted that there has been other similar issues in Alaska recently.</p> <p>Next meeting to be confirmed by the secretariat.</p>	

List of Abbreviations	
BOWL	Beatrice Offshore Windfarm Ltd
ECOW	Ecological / Environmental Clerk of Works
ECOWind	Ecological Consequences of Offshore Wind
GBBG	Great Black-Backed Gull
MMMP	Marine Mammal Monitoring Programme
Moray East	Moray Offshore Windfarm (East) Limited
Moray West	Moray Offshore Windfarm (West) Limited
MFRAG	Moray Firth Regional Advisory Group
MFRAG-O	Moray Firth Regional Advisory Group – Ornithology Subgroup
MS-LOT	Marine Scotland Licensing Operations Team
MSS	Marine Scotland Science
NatureScot	Previously called Scottish Natural Heritage (SNH)
OWEC	Offshore Wind Evidence Change Programme
PEMP	Project Environmental Monitoring Programme
ScotMER	Scottish Marine Energy Research
SPA	Special Protection Area (designation under the European Union Directive on the Conservation of Wild Birds)
WTG	Wind Turbine Generator