

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

Meeting	MFRAG-Ornithology (MFRAG-O)	
Date	8 th November 2022; 14:00 – 17:00	
Location	Teams call	
Attendees	Marine Scotland Science (MSS)	Sue O’Brien (SO)
	NatureScot	Erica Knott (EK), Jenna Lane (JL), Kate Thompson (KT), Chris Eastham (CE)
	Marine Scotland Licensing and Operations Team (MS-LOT)	Gayle Holland (GH)
	Marine Scotland Policy	Alexander Gilliland (AG)
	BOWL	Joseph Deimel (JD), Heather Shaw (HS)
	JNCC	
	Moray East	Eliana Mercy (EM)
	Moray West	Nuria Abad Oliva (NA)
	MacArthur Green (Moray West Ornithology Advisor)	Ross McGregor (RM), Bob Furness (BF)
	RSPB	Aly McCluskie (AM)
	MacArthur Green (BOWL Ornithology Advisor)	Mark Trinder (MT)
Apologies	Chris Newman (Moray West); Catherine Kelham (RSPB); Orea Anderson and Julie Black (JNCC); Jared Wilson and Julie Miller (MSS)	
Action Number	Action	Completion Date
1	MacArthur Green to look at outstanding aerial survey monitoring commitments of the 3 Moray Firth projects, and to produce a note with more details of a combined survey approach. MT and RM (MacArthur Green) to refer back to the key questions and what we are trying to achieve, and further update the proposal to make clear link to the proposed survey methods/design.	End Feb 2023
2	Developers to provide MacArthur Green with DAS dates and extract of data observation.	TBC
3	MacArthur Green to prepare a position paper, including what is known about connectivity of the ECC SPA GBBG with the wind farms, attempts undertaken to date to reduce knowledge gaps, and findings and	End Feb 2023

	achievements so far, and recommended next steps. Deadline end of Feb.	
Date of Next Meeting	Early to mid-March – specific date to be proposed by Moray West	

1. Introductions

Updates on the list of attendees made:

- Chris Eastham leaving NatureScot, Jenna Lane is joining the NatureScot team
- Sue O'Brien will be marine ornithology lead representative from MSS. Tom Evans has left and Julie Miller is on maternity leave.
- Alexander Gilliland from the ScotMER group is replacing Janelle Braithwaite as the Marine Scotland Policy representative at the MFRAG meetings

2. Meeting objectives and review actions from the previous meeting (8th Nov 2022)

Status of Actions from previous meeting:

1. MacArthur Green to review the study on catching seabirds at sea published by the Dutch Government and make contact with the author
This action is now considered superseded, since we are not planning to tag birds in the near future. Given the Highly Pathogenic Avian Influenza Virus (HPAIV) epidemic, catching birds at sea has been considered as high-risk activity.
2. Moray West to issue to group an updated method statement with clarification that survey altitude across the whole area will be to produce a 2cm resolution.
Action completed. Version 1.8 of the Methods Statement issued, email sent from NA on 1st April.
3. MacArthur Green to produce a note with an initial outline for GB tagging workshop.
As per action 1 above, until there is reasonable prospect of catching birds for tagging, there is little value in organising this workshop. Also, BTO results haven't been yet released.
4. MacArthur Green to look at outstanding aerial survey monitoring commitments of the 3 Moray Firth projects, and to produce a note with more details of a combined survey approach.
There were discussions on what are the outstanding questions that need to be addressed in this note. Clarification on the advantages of undertaking aerial surveys during the PrePARED timeframe were discussed, and it was concluded that there is little value, given the different scopes. Action to be carried forward, MT and RM (MacArthur Green) to refer back to the key questions and what we are trying to achieve, and further update the proposal to make clear link to the proposed survey methods/design.

<p>5. JD to look at the original ornithological monitoring questions, and feedback to the group. Email sent by JD on 22 April. JD informed there are no definite questions set out. These may be reviewed in the future.</p>	
Actions	<p>1. MacArthur Green to look at outstanding aerial survey monitoring commitments of the 3 Moray Firth projects, and to produce a note with more details of a combined survey approach. MT and RM (MacArthur Green) to refer back to the key questions and what we are trying to achieve, and further update the proposal to make clear link to the proposed survey methods/design. Deadline: End Feb, in advance of next MFRAG-O call</p>
3. Moray East Project	
3.1 Moray East project update	
<p>EMA provided a project update.</p> <p>Ongoing activities:</p> <ul style="list-style-type: none"> • OFTO transaction expected no later than 15 Jan (post meeting updates: expected mid Feb) • Ongoing site maintenance • Major repairs anticipated to be required <p>Surveys:</p> <ul style="list-style-type: none"> • Aerial surveys completed May-July. Data processing ongoing, following which analysis will be undertaken. Report to be made available 3 months after completing data analysis. <p>A three-year post-construction survey is proposed at this time, subject to a review of the key questions initially proposed.</p> <p>Following which a review of key questions will take place. This aims not only to confirm if questions have been asked satisfactorily, but also review if all questions are still relevant, and our ability to address them.</p>	
Actions	None
4. BOWL Project	
4.1 BOWL project update	
<p>JD provided BOWL project update.</p>	

<p>2021 aerial survey completed, and analysis if the data is currently under internal review. To be made available shortly. Results have shown limited displacement, similar to the results presented in the 2019 surveys report. Report will capture comparisons to allow understanding changes across the years. (Post meeting updates – BOWL 2021 Aerial survey sent to MFRAG-O on 22 November 2022)</p> <p>Installation of puffin monitoring camera at East Caithness Cliffs SPA (at Laidhay, near Dunbeath) to be completed soon – this week and next. To be run continually during the winter to maintain functionality of camera electronics. Will look to have future discussion on metrics with the RAG.</p>	
Actions	None
5. Moray West Project	
5.1 Moray West project update	
<p>NA provided a Moray West project update.</p> <p>Project updates and offshore construction programme provided.</p> <ul style="list-style-type: none"> • Commencement of OfTI construction – from December 2022 • Commencement of Wind Farm Construction – from 1 June 2023 • 16 monthly aerial surveys completed in October. Data from 2021 available, waiting for processing of 2022. Following which data analysis will be undertaken in 2023 and then reported to MFRAG-O when the final report is available. • GBBG field observations were completed between April and July 2022, and the report issued to MFRAG-O on 20 October 2022(see item 6 below) 	
Actions	None
6. MacArthur Green ECC SPA Great black-backed Gull Foraging Flights monitoring Report – Discussion of results	
<p>BF presented the key findings of the ECC SPA Great black-backed Gull Foraging Flights monitoring. The report shared with MFRAG-O group on 20/10/2022 (attached below).</p> <p>A total of 39 hours of observational data on movements were acquired between April to July 2022, from four colonies within ECC SPA, covering almost all of the coastal length of the SPA (from just south of Wick to just north of Berriedale).</p> <p>Numbers observed were very similar to those observed by BF a few years ago.</p> <p>Recording departure directions was a bit problematic as GBBG do not depart in a straight line, as they use the wind of the cliffs to get height to reach altitude. Measuring angle of departing was challenging as these</p>	

needed to be estimated from the observatory position, rather than nest. But it was clear to observe if they were going offshore or staying in land.

There were 2 people undertaking the survey. It is noted that 3 would have been the ideal for measuring purposes. Some birds were observed flying in circles over the colony, sometimes not going anywhere to forage. Given the number of birds at a time, 3 people is recommended to better track the individuals.

At these sites, it is very difficult to identify the nests given grass and vegetation. Therefore, it was difficult to define the breeding status of the individuals. Moreover, some of the birds would establish a temporary AOT and then leave.

It is noted that the observations were more complex than expected. As the birds are not marked, it was difficult to follow individuals. Very difficult to observe chicks as the grass was too tall – breeding success difficult to determine but it appear not to be very high. Several pairs had chicks.

Avian influenza possibly not an issue. There were other birds affected (gannets, guillemots and kittiwakes), but didn't appear to be affecting GBBG particularly, if at all.

Tidal rhythm of the behaviour of these birds was observed. There is little literature data on tidal rhythm on most seabirds, but these birds appear to feed at low tide and lots of the foraging was in the intertidal zone. Field work was not designed to target the effects of tide, although there appear to be one.

Attendance of adults in the AOTs was high.

There was strong seasonal variation. T Birds were seen foraging inland only in April, but mostly foraged along the coast, some around fishing boats. During June – July, birds were observed mostly foraging at fish shoals, sandeels probably, particularly during July, which is late for sandeels. This might be likely to change year by year.

Differences in activities between morning and afternoon were also observed, the birds were mostly feeding in the morning and less in the afternoon. This might suggest that they do not have difficulty finding food.

Foraging at low tide would occur approx. 100 m from the nest , which demonstrated that the birds were able to feed very close to the colony. They would fly in circles, and then drop to the show and spend 15 min looking for food. Birds going up and down the coast, may be scavenging, feeding in the intertidal, or predated other seabird colonies.

It was noted that if tracking these birds using tagging systems, it would not be possible to distinguish birds at colony and the observed foraging trips. This is because the foraging areas would fall within the colony geofenced area. Only with observations is possible to confirm that these birds were foraging.

Few food samples were collected, because of bird influenza and the fact that nests were not easily accessible. Few regurgitates found. All samples were destroyed as a precaution.

Few fishing boats observed during the survey, and the birds at the colony seem to ignore them. There were occasions where other GBBG were observed following some fishing boats, scavenging behind these boats, but the birds at the colony didn't seem to follow them. Fishing boats occurred 7 days/week

Overall, the survey allowed a fairly good picture, with a good foraging variety, mostly at intertidal and sandeels breaking out in the surface. Majority foraging up and down the coast, not further offshore as wind farm sites.

Discussions

Quality of the report commended by KT, AM and SO.

KT question if GBBG observations could have been effect of the particular year. Noting that foraging will depend on what is available at the time. BF – likely that it varies from year to year – the report indicates that GBBG as species are generalist, but as individuals they do specialise, but they are able to switch to what it is available even if they are specialists. Birds switch to feed on a better-quality diet when they feed chick (e.g. sandeels). It did not seem that there was a lot of sandeel availability, although there will be variability day to day and year to year.

MT pointed that at the wind farm sites there is a larger number during non-breeding seasons. Peaks at winter. Whether these are coming from the SPA is the question. KT noted that Moray East surveys from 2019 have shown gulls at the jackets on BOWL. BF pointed that these might not be local. For example, Norwegian over summering birds that are not breeding in any particular year – this is only a guess.

AM suggested the use of different methods to help with the angle. BF says the key is when do they make a decision on where they are going, is when they head to a specific direction. Otherwise, they are seen gliding with the wind in circles, which does not cost them anything as they are gliding with the wind.

AM asks if the tidal rhythm could be seasonal, or if there is any pattern. BF clarifies it is likely to be more frequent in April and May rather than later in season when breeding adults will seek high energy food for chicks.

SO question if GBBG were feeding on the corpses of birds affected by flu. BF explains it has been seen on guillemots that could have been affected by flu, not gannets. Although observations were made near the AOT, not the colonies of guillemot and kittiwakes.

SO also asked if foraging behaviour has changed because of the availability of dead animals. Questions about the representativeness of the year. Is it possible that if their breeding success was higher, the birds would fly further away to try to get a better quality food resource? BF – it could, they could have been foraging further offshore. But it seems to be the flocks of sandeel nearby, 2 – 3 km from the coast where adults are foraging and not far offshore.

EK suggests checking if these observations were at the same time of offshore surveys. Developers to provide the dates of Digital Aerial Surveys to MacArthur green and extract of relevant data observation.

RM reminded that the purpose of this fieldwork was, in the absence of any tagging being possible, help us understand of any likelihood of connectivity between birds and the wind farm. This study adds to the growing evidence that GBBG are mostly coastal during the breeding season.

Questions were raised about what should be done next, in the impossibility of tagging any time soon given bird flu. MT reminded that the birds that BF has been observing cannot be caught as they nest on top of stacks. Those birds are probably untaggable, which is also part of the consideration. Previous tagging was undertaken accessible sites only and these were mostly in the south of the SPA..

The possibility of undertaking boat-based surveys following birds from the coast was raised by SO. While weather conditions in the summer could allow, during the winter that could be challenging. Also noted that observations from boat based platforms can affect as there may be a change in behaviour.

GH raised a question about if there is value on repeating the surveys in different year or whether we have enough information from this work. BF suspects that results would be very similar, with some variability between years but the whole picture would be very similar. It would be possible to do it again. A camera could also be set up to monitor they attendance and monitoring activity for tidal cycle.

It was noted that there are questions to be responded using aerial data. But these would be irrelevant if there is not connectivity.

MacArthur Green to prepare a summary paper, including what is known about GBBGs at the Moray Firth sites from existing and completed by yet to be reported aerial surveys, connectivity of the ECC SPA GBBG with the wind farms including from colour ringing studies , attempts undertaken to date to reduce knowledge gaps, and findings and achievements so far, and recommended next steps. This should be reviewed in the next MFRAG-O call mid March 2023, to allow preparation of further observation surveys if these are required. It was agreed during the call that no tagging will be undertaken next year.

Actions	<p>2. Developers to provide MacArthur Green with DAS dates and extract of data observation.</p> <p>3. MacArthur Green to prepare a summary paper, including what is known about connectivity of the ECC SPA GBBG with the wind farms, attempts undertaken to date to reduce knowledge gaps, and findings and achievements so far, and recommended next steps. Deadline end of Feb.</p>
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7. Strategic Work Updates

No comments.

Actions	None
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8. AOB and close

Developers have agreed to chair MFRAG-O and MFRAG-MM meetings.

List of Abbreviations	
BOWL	Beatrice Offshore Windfarm Ltd
DAS	Digital Aerial Survey
ECC	East Caithness Cliffs
ECoW	Ecological / Environmental Clerk of Works
GBBG	Great Black-Backed Gull
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)
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