

Dee District Salmon
Fishery Board



Dee District Salmon Fishery Board

Marine Licensing and Consenting Casework Officer
Licensing Operations Team
Marine Directorate
Scottish Government
Marine Laboratory
375 Vicotria Road
Aberdeen
AB11 9DB

By email to MS.MarineRenewables@gov.scot

10th October 2023

Dear Iain Macdonald,

REQUEST FOR COMMENT: ON KINCARDINE OFFSHORE WINDFARM LIMITED - REVISED PROJECT ENVIRONMENTAL MONITORING PROGRAMME - POST-CONSENT PLAN CONSULTATION

On behalf of the Dee District Salmon Fishery Board (Dee DSFB) we welcome the opportunity to respond to the *Kincardine Offshore Windfarm Limited - Revised Project Environmental Monitoring Programme - Post-consent plan consultation*

Designations & Conservation Status

As a statutory body charged with the protection of Atlantic salmon and sea trout stocks within its district, the Dee DSFB has a duty to ensure that there are no significant adverse impacts upon the populations of these species.

The Dee has been designated as a Special Area of Conservation under the EC Habitats Directive 92/43 EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna for Atlantic salmon (the principal species for which it receives this designation). The Dee District also supports populations of trout, eels and brook, river and sea lampreys.

Sea trout, common to all the rivers within the Dee District, are a priority species under the United Kingdom's Biodiversity Action Plan (UKBAP).

All lamprey species are protected under the EC Habitats Directive whilst river and sea lampreys are additionally protected under the UKBAP priority list.

Eels are a UKBAP priority species, critically endangered under the IUCN red list and protected under CITES.

Wild Salmon Strategy and Conservation regulations

In January 2022, the Scottish Government released its Wild Salmon Strategy which gave a clear message that there is sadly now unequivocal evidence that populations of Atlantic salmon are at crisis point. The Strategy calls on government agencies, as well as the private sector, to prioritise the protection and recovery of Scotland's wild Atlantic salmon populations.

One of the key pressures identified in the strategy is marine development, with marine renewables highlighted as having the potential to impact salmon through noise, water quality and effects on electromagnetic fields (EMFs) used by salmon for migration.

Furthermore, the Conservation of Salmon (Scotland) Regulations 2016 has led to the production of stock assessments for all Scottish salmon rivers, based on catch data. The assessments estimate whether the number of adults returning to the river in each of the previous five years will produce enough eggs to keep the population size above a critical threshold.

For the Dee, like other north-east rivers, the assessments have shown a declining trend in catches since 2011. Nonetheless, the Dee has been categorised as a Grade 1 river, meaning that the stocks have most likely been above the critical threshold - the Conservation Limit - over the last five years. It is however apparent that specific stock components, such as the Spring salmon stock on the Dee are critically low.

Assessment of the juvenile salmon stocks in the Dee through the National Electrofishing Programme for Scotland (NEPS) has evaluated juvenile stocks in the Dee as Grade 2, suggesting that there are significant issues with recruitment and survival within the catchment (Malcolm *et al* 2020). With greater pressures on marine survival such that only approximately 3% of smolts return to the river as adults, we need to address any pressures within the freshwater and marine environments to protect Dee salmon stocks.

Position

The Dee DSFB welcomes the opportunity to respond to the revised PEMP and would wish to be consulted further during this process with specific interest in the migratory fish species Atlantic Salmon and sea trout. We echo the comments of our representative body for Scotland's District Salmon Fishery Boards, Fisheries Management Scotland on this consultation and call for more research upon the impacts on diadromous fish.

However, we do not feel that the research proposed in this revised plan assesses the impact of this development or that of other offshore windfarm developments on diadromous fish and are not in support of this proposed approach.

Whilst this technique to be developed could, in time, help determine the larger scale movement patterns of salmon, it is not clear how the proposed research will contribute to identifying migration routes of salmon in the context of marine renewables sites. Furthermore, given the existing evidence and general agreement that migrating salmon will at some point be within the area of marine renewables, the focus should be on understanding the potential impacts of these developments. Overall, the proposed research is far removed from delivering on the crucial aim of understanding if marine renewables are impacting on diadromous fish. Funding set aside by developers for addressing this significant potential issue should not be used simply to further academic research.

Under Scottish Marine Energy Research (ScotMER), the [Diadromous Fish Receptor Group](#) has identified evidence gaps related to the health, distribution, and impacts on Diadromous fish (salmon, sea trout, etc.). Scottish Government has published an 'evidence map' (available for download at the above link) which identifies and scores these evidence gaps according to a specific prioritisation process. It is important that the relevant evidence gaps are considered in full by the developer, and developers should *contribute* to filling these evidence gaps.

Offshore developments have the potential to directly and indirectly impact diadromous fish. We would therefore expect developers to assess and, where necessary, mitigate the potential impacts of the development. These potential impacts have been highlighted through ScotMER, and include:

- Avoidance (including exclusion from particular rivers and subsequent impacts on local populations);
- Disorientation effects that could potentially affect behaviour, susceptibility to predation or by-catch; and
- Impaired ability to locate normal feeding grounds or river of origin; and delayed migration

Conclusion

We remain keen to work constructively with the developers and Marine Scotland to identify appropriate monitoring programmes which will allow us to be able to assess the acknowledged risks of this development, and other proposed developments in a more appropriate manner. There is a clear and urgent need to fund, plan and start strategic research on the movement, abundance, swimming depth, feeding behaviour and impact pathways relevant to diadromous fish. Such research would clearly feed into the potential mitigation measures that might be deemed appropriate, and the conditions under which such mitigation should be enacted. Developers should be required to work together to fund strategic monitoring, in order to allow more certainty for all involved.

Yours sincerely

Redacted

Jamie Urquhart

Fisheries Protection Manager, Dee District Salmon Fishery Board

Marine Directorate – Science,
Evidence, Data and Digital
(Physical Processes Advice)



E: MD-SEDD-RE_Advice@gov.scot

Iain Macdonald
Marine Directorate Licensing Operations Team
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

02 October 2023

**KINCARDINE OFFSHORE WINDFARM LIMITED – REVISED PROJECT
ENVIRONMENTAL MONITORING PROGRAMME – POST-CONSENT PLAN**

Marine Directorate advisers have reviewed the request from MD-LOT and provide the following advice.

Marine Mammals

Noise profiling studies – pre- and post-construction

MD-SEDD have previously issued advice in relation to the underwater noise profiling work carried out by KOWL (see correspondence dated 24/08/2023). In this advice, MD-SEDD noted that there were several issues that remain insufficiently addressed in relation to their consent conditions. MD-SEDD reiterated that whilst the FORTUNE project was a valuable mechanism to inform some aspects of consent condition 22b, it did not provide all the information required and that the responsibility lies with KOWL, not the authors of the FORTUNE project, to provide this information going forward. The following issues relating to the noise monitoring previously raised in our advice still remain.

- ***The inclusion of mooring-generated transients in the noise modelling.*** The acoustic environment includes not only turbine signature noise but also mooring generated transients and should be included in the modelling and source level estimations. Though outside of the scope of the FORTUNE project, MD-SEDD consider this is not outside of



the scope of the PEMP. The FORTUNE report clearly states that transients created by the mooring system are contributing considerably to the noise signature of floating offshore wind turbines, and cannot be ignored in noise impact assessments. Therefore MD-SEDD consider that this aspect of the noise emitted by the turbines requires characterisation in order to satisfy the consent condition 22 b.

- ***Long-term data on the variation in soundscapes.*** MD-SEDD maintain that long-term noise profiles are required through the PEMP and that they have not been adequately characterised to account for the potential environmental and operational variation. MD-SEDD are aware of the time constraints of the FORTUNE project, however this issue remains. MD-SEDD consider that the monitoring thus far (only one month) is insufficient to characterise the variation in noise output over a long enough period to satisfy the consent condition 22 b. MD-SEDD advise that noise profiling is carried out over at least a full 12 month period in order to adequately assess seasonal variation.

MD-SEDD advise that while the FORTUNE project has addressed some aspects of the PEMP it does not fully satisfy all of the conditions required to discharge the condition. MD-SEDD agree with Dr Steven Benjamins from SAMS and the developers that some of the issues raised by MD-SEDD are not be addressed by the FORTUNE project due to being out of the original project scope. However, this does not result in consent conditions being met. MD-SEDD reiterate that the FORTUNE project report, as it stands, is not sufficient to address consent condition 22 b and recommend to LOT that further monitoring (to address the long-term aspect) and further modelling (to address the inclusion of transients) work is required. In our last correspondence, MD-SEDD stated an expectation to see these shortfalls expressly detailed in following PEMP iterations. This current iteration of the PEMP now discusses these issues, but falls short of taking any steps to address them.

Entanglement – ROV studies and monitoring for strains on mooring lines

MD-SEDD have enquired about the installation of load cells repeatedly in past correspondence, and this current iteration of the PEMP is the first update we have received that discusses this issue. MD-SEDD was not informed of the final decision not to install the load cells; the last iteration of the PEMP simply stated that the devices were yet to be installed. We note that whilst the developers now express doubt in the current iteration of the PEMP as to the ability of this system to detect any entangled fishing gear, these concerns were not raised in the initial version of the PEMP or discussed with MD-SEDD. MD-SEDD request clarity on why this was not progressed. MD-SEDD have also requested further

technical information on the position monitoring system. To date, these details have yet to be provided. Without this information, MD-SEDD cannot assess whether this approach is appropriate to monitor the occurrence of entangled fishing gear to satisfy consent condition 22 a ii.

With regard to the ROV surveys, MD-SEDD have requested clarification on the regularity of these surveys in past correspondence. MD-SEDD advise that the minimum interval of two years specified in the current iteration of the PEMP is too infrequent to sufficiently monitor potential entanglement of ghost fishing gear. We recommend that ROV surveys are conducted at least once per year to adequately establish the occurrence of entangled fishing gear. Intervals of more than one year would not provide information at a suitable temporal resolution to establish the prevalence of this issue at the KOWL site. Further, MD-SEDD note the PEMP states that the results of these surveys could be used to corroborate data from the position monitoring system. MD-SEDD request clarification on specifically how these data will be combined, particularly given the long periods between ROV inspections. MD-SEDD recommend that the results of each ROV survey (past and future) are submitted to MD-LOT, regardless of whether any entanglements are detected (noting that the absence of entangled gear is equally useful information).

Diadromous Fish

MD-SEDD have no comments on the updated diadromous fish chapter and welcome the involvement of KOWL in the delivery of the PhD project.

Ornithology

The justification for stopping the collection of data using DTBird is unclear, and any decision should be informed by the analysis and reporting that the PEMP indicates is still to be carried out, and following discussion with NS, RSPB and MD.

The analysis of the digital aerial survey data includes mention of "maps, tables and histograms" but it is not clear what analyses would be involved. The analyses methods should be identified for each of the bullets in this section.



Yours sincerely,

Renewables and Ecology Team

Marine Directorate – Science, Evidence, Data and Digital



NatureScot

Iain MacDonald
Scottish Government – Marine Directorate
Licencing and Operations Team
Marine Laboratory
Aberdeen
AB11 9DB

18 October 2023

Our ref: CNS REN OSWF Kincardine
PEMP

By email only

Dear Iain

KINCARDINE OFFSHORE WINDFARM – REVISED PROJECT ENVIRONMENTAL MANAGEMENT PLAN (PEMP)

Thank you for consulting NatureScot on Kincardine Offshore Windfarm Limited's updated Project Environmental Monitoring Programme (PEMP).

We have reviewed the revised PEMP (Doc. No. KOWL-PL-0004-007) and we have comments as follows.

We note in section 4.2.2 of the updated PEMP that KOWL intend (subject to further discussion) to cease DTBird data collection in January 2024 once two years' worth of data have been collected. We would welcome further discussion on this proposal by way of a meeting with the relevant stakeholders before a decision is made.

The roosting gull surveys are detailed in section 4.2.4. These surveys were carried out for an initial period of 12 months, between November 2021 and October 2022, to determine gull attraction to the turbine substructures as a possible driver of collisions. The results showed that gulls use the turbine substructures for roosting in the post-breeding period (mid-June to early September). As suggested in KOWL's Roosting Gull Survey Report (Doc No. KOWL-REP-0001-008), we wonder if there are any scope for further roosting gull surveys focusing on this post-breeding period and investigating more parameters such as species?

An update on KOWL's consent condition requirement to provide a detailed entanglement monitoring and reporting schedule, particularly of load on the moorings and derelict fishing gear, is provided in section 5.2.2. From the information provided, we understand that installing load cells to the mooring lines for continuous monitoring of mooring line loads was determined to be

an ineffective method for detecting entanglement of fishing gear. As an alternative, a 'position monitoring system' has been installed on each turbine structure, which will indicate if a mooring line load has changed over a period based on observing a change in the offset of the structure. We are unfamiliar with this system and we would welcome more detailed information on this. In particular, we would like to know:

- What confidence there is that this position monitoring system can detect entanglement of fishing gear?
- What period of time does it take for the system to detect a mooring line load change?
- If a mooring line load change is detected, what is the procedure and methodology for investigating the cause (including timings)?
- If fishing gear is detected, what is the process for removal and when?

We note that periodic (minimum every two years) maintenance ROV surveys will be able to monitor the presence of ghost fishing nets lodged on the mooring system, and that the surveys could be used to corroborate data from the position monitoring system. We would welcome further discussion on what happens if monitoring detects fishing gear.

Lastly, we welcome KOWL's contribution towards a PhD study, starting in Autumn 2023, which is aiming to address the key knowledge gaps in assigning diadromous fish to their natal rivers. We look forward to hearing more about the progress of this project.

I hope our advice is helpful.

Yours sincerely,

Jenna Lane

Marine Sustainability Officer – Marine Energy

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Royal Society for the
Protection of Birds Scotland

Marine Directorate Licensing Operations Team
Marine Scotland
By email: MS.MarineRenewables@gov.scot



6th October 2023

Dear Iain,

KINCARDINE OFFSHORE WINDFARM LIMITED - REVISED PROJECT ENVIRONMENTAL MONITORING PROGRAMME - POST-CONSENT PLAN CONSULTATION

Thank you for consulting RSPB Scotland on the reviewed project environmental monitoring programme (PEMP) for Kincardine Offshore Windfarm. We have commented on previous versions of the PEMP and attended a meeting with HiDef, NatureScot and the applicant to discuss DT-Bird and data analysis in June 2022 and September 2022 respectively. Our comments here are focused on the ornithological elements of the PEMP.

Section 4.2.1 references the meeting held on 8th September 2022 and erroneously suggest there were “technological challenges in mounting GLS tags to Puffins and Kittiwakes”. There are challenges with Puffins which may be due to tag and/or handling effects, but GLS have been successfully fitted to kittiwakes (e.g. Léandre-Breton et al., 2021^[1]). It is also incorrect that kittiwake tagging has been gathered by BTO at Fowlsheugh. Data at Fowlsheugh has been gathered by the RSPB while BTO have collected tagging data from kittiwakes from Buchan Ness to Colliston Coast SPA. We note that KOWL have stated they will seek access to this data – requests for Fowlsheugh data should in the first instance be made via MD-LOT.

In regard to analysing aerial survey data, this should include a power analysis to determine whether distributional changes can be meaningfully detected. We do not recommend the use of flight height derived from aerial survey carried using the HiDef method as we do not consider it to be an accurate representation of bird flight height and requires further validation.

Despite the two meetings in 2022, RSPB Scotland still feel there are unanswered questions around the DT-Bird system and consider it also needs further validation. We are also dubious about the use of audio to

[1] Léandri-Breton, D.J., Tarrow, A., Elliott, K.H., Legagneux, P., Angelier, F., Blévin, P., Bråthen, V.S., Fauchald, P., Goutte, A., Jouanneau, W. and Tartu, S., 2021. Long-term tracking of an Arctic-breeding seabird indicates high fidelity to pelagic wintering areas. *Marine Ecology Progress Series*, 676, pp.205-218.

RSPB Scotland Headquarters
2 Lochside View
Edinburgh Park
Edinburgh
EH12 9DH

Tel: 0131 317 4100
Facebook: @RSPBScotland
Twitter: @RSPBScotland
rspb.org.uk



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identify the birds and are unsure how much data is being analysed – within section 4.2.2. '12 months' has been crossed out and 'data' remains.

We are unable to find the summary of visual surveys of gulls utilising turbine structures and would be grateful if this could be re-sent to us. We would also welcome further information on how observer effects have been determined in the visual surveys.

Finally, we note that KOWL proposed to cease data collection in January 2024. We currently consider there are outstanding matters around the functionality of the DT-Bird system which still need to be addressed. Only once these have been resolved, and only with agreement of the SNCBs should data collection cease.

I trust this is of assistance. Should you require any further information or clarification, please do not hesitate to get in contact.

Yours sincerely,

Redacted

Senior Marine Conservation Planner
RSPB Scotland

RSPB Scotland Headquarters
2 Lochside View
Edinburgh Park
Edinburgh
EH12 9DH

Tel: 0131 317 4100
Facebook: @RSPBScotland
Twitter: @RSPBScotland
rspb.org.uk



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