Scoping Consultation Responses

UK Chamber of Shipping

From:	Eleanor Norris
To:	MD Marine Renewables
Subject:	UK Chamber of Shipping Response to MachairWind Offshore Windfarm – ScotWind W1 Site Scoping Consultation
Date:	22 November 2024 10:41:46

Good morning,

The UK Chamber of Shipping (UKCoS) welcomes the opportunity to provide comments on the scoping report for the MachairWind Offshore Windfarm – ScotWind W1 Site. Our response focuses on Shipping and Navigation aspects, where we believe further work is required to ensure robust assessments and adequate stakeholder engagement.

1. Assessment of Navigation Risk

The scoping report proposes a deviation to a distinct north-south cargo route, which is a matter of concern. This deviation may result in increased steaming distances, additional operational costs, and movement into more constrained inshore waters, raising safety risks for commercial and recreational vessels.

We expect the Environmental Impact Assessment (EIA) to:

- **Traffic Density Analysis**: Conduct a full 12-month AIS dataset analysis to ensure seasonal variations in vessel activity are captured. The current use of two shorter surveys is inadequate for assessing year-round traffic density.
- **Historical Incident Data**: Utilise at least 20 years of Marine Accident Investigation Branch (MAIB) data to provide a comprehensive historical perspective on navigational risks. The proposed 10 years is insufficient for identifying long-term patterns.
- **Isolated Structures**: Fully assess the navigational risks posed by isolated structures at the southern tip of the development area, including their potential impact on vessel operations.

2. Cumulative and Transboundary Impacts

The Chamber supports the inclusion of a cumulative impact assessment within a 50nm buffer but notes that this must address transboundary effects. Offshore developments in Northern Ireland and the Republic of Ireland may have significant implications for shipping routes, which must be considered.

- Include potential interactions with other offshore projects in the region, both operational and planned, to evaluate their combined effects on shipping and navigation.
- Assess how transboundary developments could affect international shipping lanes, ensuring coordination with relevant authorities across jurisdictions.

3. Emergency Preparedness

Emergency response planning is needed to ensuring safety in the vicinity of the windfarm.

- Assess emergency anchoring and refuge options for vessels, particularly in poor weather conditions or during incidents near the windfarm.
- Demonstrate coordination with the Maritime and Coastguard Agency (MCA) and other maritime authorities to ensure robust incident response procedures are in place.

4. Mitigation Measures

The mitigation measures outlined in the scoping report are broadly in line with expectations but require refinement to address specific concerns.

- Assess the potential impacts on existing Aids to Navigation (AtoNs), including lighthouses, and outline mitigation measures to maintain their functionality.
- Explore adjustments to the eastern Routeing and Licensing Boundary (RLB) to better accommodate shipping receptors and reduce navigational constraints.

It is unclear where the commercial and environmental impacts of deviations to shipping routes are addressed if not within the current Shipping and Navigation chapter. We recommend that these impacts be explicitly included in the Environmental Impact Assessment, as they represent significant considerations for maritime operations.

The Chamber is particularly concerned about the potential impact on existing Aids to Navigation (AtoNs), including the Dubh Artach Lighthouse, which serves as a critical navigational aid for vessels in this region. The Environmental Impact Assessment (EIA) must evaluate how the development, including wind turbines and associated infrastructure, might affect the visibility and operational functionality of these AtoNs. This should include an assessment of potential electromagnetic interference on electronic navigation systems and the visibility of lighthouses. Mitigation measures, such as enhanced marking and lighting of turbines, must align with the standards set by the Maritime and Coastguard Agency (MCA) and the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA). Additionally, isolated structures at the southern tip of the development area pose specific navigational risks. Their placement could obstruct vessel routes, create pinch points in constrained waters, and increase risks during adverse weather conditions. The EIA should examine the layout of turbines in this area, ensuring they do not interfere with key routes or emergency anchoring and refuge options.

5. Stakeholder Inclusion

We are concerned that the UK Chamber of Shipping is not listed as a consultee under Paragraph 624, nor are key stakeholders such as regular operators or the Cruising Association.

- Ensure the UK Chamber of Shipping is included in ongoing consultations.
- Incorporate input from regular commercial operators identified via traffic surveys and organisations such as the Cruising Association to provide a comprehensive view of stakeholder concerns.

6. Additional Comments

The Chamber supports the scoping in of all potential impacts across the construction, operation, and decommissioning phases of the project and agrees that no impacts should be scoped out at this stage.

However, we recommend that alternative site configurations within the wider development area be explored to minimise interference with established shipping routes and enhance navigational safety.

The UK Chamber of Shipping appreciates the opportunity to contribute to the scoping consultation. We trust that our comments will guide the development of a robust EIA that addresses the concerns outlined above.

We remain available for further discussion and look forward to continuing engagement on this project.

Kind Regards,

Ellie Norris

Policy Manager (Safety)

UK Chamber of Shipping
30 Park Street, London, SE1 9EQ
DD +44 (0) 20 7260 1785
[Redacted]
enorris@ukchamberofshipping.com
www.ukchamberofshipping.com
Redacted

The Royal Society for the Protection of Birds (RSPB)

Abby Gray
Marine Licensing and Consenting Casework Officer
Licensing Operations Team
Marine Directorate
Scottish Government
Marine Laboratory
Aberdeen
AB11 9DB

By email: MD.MarineRenewables@gov.scot

26th November 2024

Dear Abby,

SCOTTISH POWER RENEWABLES – MACHAIR WIND: OFFSHORE WIND FARM SCOTWIND W1 SITE NORTHWEST OF ISLAY AND WEST OF COLONSAY REGULATION 14 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

Thank you for consulting RSPB. We note that the headline indicates a scoping assessment. However, we note that a HRA screening report is included within the documentation and are responding on this basis. We understand the proposed development will comprise up to 130 WTGs on fixed foundations with the design parameters that preclude an option for floating WTGs, with a nominal capacity of 2 GW, along with associated infrastructure including transmission cabling.

We understand that the HRA relates only to offshore generation and transmission assets, i.e. that associated onshore infrastructure will be subject to separate regulatory / consenting processes.

An important factor in any final application may also relate to enhancement in addition to compensation. This is because we understand consideration is being given to incorporating Marine Biodiversity Enhancement requirements into National Marine Plan 2 and, depending on application submission timeframes, this potential requirement should also be considered in relation to offshore elements. Regarding compensation we question if any thought has been given to regional compensation given the proximity of other wind farms proposals.

Faced with the threats of climate change to the natural world, RSPB considers that a low-carbon energy transition to reach net zero is essential to safeguard biodiversity. Inappropriately designed and/or sited developments can however cause serious and irreparable harm to biodiversity and must be avoided. We have reviewed the screening report in this context and offer the following comments.

General Comments

The UK is of outstanding international importance for its breeding seabirds and wintering marine birds. As with all Annex I and regularly migratory species, the UK has a particular responsibility under the Birds Directive to secure their conservation. Their survival and productivity rates can be impacted by offshore windfarms directly (i.e. collision) and indirectly (e.g. displacement from foraging areas, additional energy expenditure, potential impacts on forage fish and wider ecosystem impacts such as changes in stratification).

RSPB Scotland encourage the adoption of a precautionary approach to the identification of relevant protected sites for seabirds with clear methodology on the exclusion of sites and species. We generally agree with the collection and analysis methods advised by NatureScot, with some exceptions as set out below. We recommend use of the guidance notes available on their website to inform assessment. If an Applicant chooses to undertake supplementary modelling using alternative parameters to that recommended, we suggest this is clearly labelled.

As set out in Searle et al (2023)[1], assessing impacts of offshore windfarms and other renewables developments is inherently uncertain. This uncertainty is propagated throughout the impact assessments, as there are not only direct impacts, but ecosystem wide impacts that can change, for example, the abundance and availability of prey. Multiple data sources and modelling techniques are used to capture a simplified version of reality. They do not fully capture the complexity of seabird behavioural or demographic processes in a dynamic marine environment.

Not recognising these uncertainties risks poorly informed decisions being made. Furthermore, an underestimation of impacts will have repercussions when consenting later offshore wind development. If a precautionary approach is taken from the beginning, the likelihood of irreversible damage occurring is reduced even whilst our knowledge base is incomplete, and modelling improves.

The precautionary principle requires the Applicant to demonstrate with scientific certainty that something would not be harmful. The concept of something being overly precautionary dismisses the inherent uncertainty in modelling and overlooks the simplistic version of reality that the modelling captures.

Detailed Comments

[1] Searle, K. R., S. H. O'Brien, E. L. Jones, A. S. C. P. Cook, M. N. Trinder, R. M. McGregor, C. Donovan, A. McCluskie, F. Daunt, and A. Butler. "A framework for improving treatment of uncertainty in offshore wind assessments for protected marine birds." *ICES Journal of Marine Science* (2023): fsad025.

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

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

We understand that the generating capacity of the proposed windfarm would be in the order of 2GW generated by up to 130 WTG's. If the number and size of the turbines to be installed changes or is uncertain when the application for the development is submitted, RSPB Scotland assumes that any assessment submitted in support of the application will reference the 'worst case scenario' when it comes to identifying LSE.

We further understand that this report is for the wind farm development area only with the offshore and onshore planning and licencing applications follow later.

Due to capacity constraints, we have not been able to interrogate every detail in some tables.

RSPB Scotland welcome the use of three breeding seasons' surveys, including years where there were the greatest impacts of HPAI on seabirds and some migratory terrestrial species. This additional work will provide useful information as to how the outbreak affected numbers recorded during surveys. We would also want consideration of the robustness of affected populations to any additional mortality arising through the development in the years following the outbreak.

While we acknowledge that Digital Aerial Surveys (DAS) provide important data for assessment, there are several methodological and presentational considerations that should be included in the assessment. These are detailed in a report drafted by a sub-group of the NatureScot Scientific Advisory Committee, Offshore Wind Ornithological Impact Assessment - Review of Digital Aerial Survey Methods[2]. The recommendations included in this report should be included in the reporting of the results of the surveys.

The applicant had not included European and Leach's Storm Petrel in their screening in of potential impacted species, because of low numbers to be recorded during surveys. These low numbers are unexpected, particularly given the proximity of the development to the Treshnish Isles SPA, which holds 27% of the UK European Strom Petrel population[3]. As such the low numbers recorded may be an artifact of the survey methodology. As highlighted in Deakin et al. 2022, DAS are likely to have inherent biases in the counts of these species. The first of these biases is related to the small size and consequent detectability of these species, particularly when on the water surface. Furthermore, both species are active throughout the diel cycle, with different levels of activity depending on location and behaviour. As DAS flights are typically restricted to the middle of the day the results are potentially biased against birds active on the site during the nighttime or crepuscular hours.

As well as screening out of European and Leach's Storm Petrel collision impacts on Manx Shearwater have been screened out. All these species can be subject to attraction

---

[2] https://www.nature.scot/doc/offshore-wind-ornithological-impact-assessment-review-digital-aerial-survey-methods

[3] Burnell, D., Perkins, A.J., Newton, S.F., Bolton, M., Tierney, T.D. and Dunn, T.E., 2023. *Seabirds Count: A Census of Breeding Seabirds in Britain and Ireland (2015-2021)*. Lynx Nature Books.

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

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

to light (such as those on turbine nacelles) and subsequent disorientation, (Deakin et al. 2022[4]) Such attraction, and subsequent disorientation, could have both direct and indirect impacts on these species. Direct impacts would be collision of birds that have altered their flight trajectory to enter the rotor swept zone, and it is most likely best considered by amended collision risk models. Indirect impacts could be through the energetic consequences of additional flight, which could result in subsequent mortality or reduced breeding performance. RSPB Scotland welcomes ongoing the discussion with the Applicant as to a suitable methodology for this assessment.

RSPB Scotland welcomes the numerous references in the Screening Report to NatureScot guidance having been followed and we also note the request made to NatureScot on how to undertake the non-breeding seasonal apportionment of the impact to SPAs using the BDMPS approach where there is more than one non-breeding season. We would advise that the applicant continues to adhere to such guidance in assessing the likely significant effects of the proposed development.

Should you wish to discuss of any of the above please do not hesitate to contact me.

Yours sincerely,

Redacted

Andrew Tait
Senior Conservation Planner, RSPB Scotland

[4] Deakin, Z., Cook, A., Daunt, F., McCluskie, A., Morley, N., Witcutt, E., Wright, L. and Bolton, M., 2022. A review to inform the assessment of the risk of collision and displacement in petrels and shearwaters from offshore wind developments in Scotland.

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

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

NatureScot

NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

Abby Gray
Marine Licensing & Consenting Casework Officer
Marine Directorate - Licensing Operations Team
Scottish Government – Marine Laboratory
Aberdeen
AB11 9DB

22 November 2024

Our ref: CNS / REN / OSWF / W1 – MachairWind – Pre-application

By Email only: md.marinerenewables@gov.scot

Dear Abby,

MachairWind Offshore Windfarm – ScotWind W1

NatureScot advice on the Environmental Impact Assessment (EIA) Scoping Report and Habitats Regulation Appraisal (HRA) Screening Report

Thank you for consulting us on the EIA Scoping Report and HRA Screening Report submitted by Scottish Power Renewables for the proposed MachairWind Offshore Windfarm Development Area (WDA).

The MachairWind Offshore WDA comprises the array area only and includes wind turbine generators (WTGs) with associated substructures and inter-array cabling. Our understanding is that separate consents will be sought for the Offshore Transmission Development Area (OfTDA) and Onshore Transmission Development Area (OnTDA) in due course.

Whilst we understand that this is due to uncertainty around grid connection options, it does raise concerns that not all potential impacts will be assessed to enable full consideration of the proposal and mitigation options. Therefore, we advise that we expect, at the Section 36 application stage, for both the WDA and OfTDA assessment to be contained within one EIA Report.

Our advice on the natural heritage interests to be addressed within the EIA Report and the Report to Inform Appropriate Assessment (RIAA) to support the S36 Application for the WDA element only is outlined below.

Policy context

We are currently facing two crises, that of climate change and biodiversity loss and as the Scottish Government's adviser on nature, our work seeks to inspire, enthuse and influence others to manage our natural resources sustainably. We recognise that this proposed development is a lease awarded through the ScotWind Leasing Round in an area identified through the Sectoral Marine Plan process for Offshore Wind Energy.

We seek to provide advice that is enabling and secures the right development in the right place with most benefit for climate change reduction and that which avoids damage, and where possible, achieves enhancement and restoration of biodiversity.

Proposal

As noted above and detailed in the Executive Summary Section (page ii) of the Scoping Report, a Scoping Opinion is being sought for the WDA only due to ongoing uncertainty over grid connection location.

Our understanding is that the Applicant intends to seek separate consents for the OfTDA and OnTDA in due course. It is noted that these elements intend to be considered "*commensurate with the level of detail that is available at the time of carrying out that appraisal"* to ensure that a whole proposal assessment is undertaken.

As highlighted above, we advise that we expect both the WDA and OfTDA assessment to be contained within one Section 36 application (and EIA Report).

The proposed MachairWind Offshore Windfarm WDA has been refined within the leased Option Agreement Area as detailed in Figure 1.1 and is sited approximately 12km west of Colonsay and 13km northwest of Islay, covering a seabed area of 510km^2. The proposed development intends to adopt a project design envelope (PDE) approach[1], which comprises:

- Up to 147 wind turbine generators (WTGs) on fixed foundations;
- WTG capacity is unstated but the total capacity is estimated to be 2 Gigawatts (GW);
- A maximum blade tip height of 340m above Lowest Astronomical Tide (LAT) and a maximum rotor blade diameter of 316m;
- Foundation options under consideration include monopile, jackets on pin piles, jackets on suction buckets and gravity base structures;
- Inter-array cabling, with a total length of approximately 450km and a proposed target burial depth of 0.5m;
- Cable protection comprising concrete mattresses, rock berm placement, rock bags or nature inclusive design solutions;
- Scour protection may be required depending on foundation type selected; and
- Consent for a 35-year operational period.

Content of the Scoping Report

We are generally content with the format of the EIA Scoping Report, which is well laid out and easy to navigate.

[1] https://www.gov.scot/publications/guidance-applicants-using-design-envelope-applications-under-section-36-electricity-act-1989/

The inclusion of the benthic survey reports alongside the Scoping Report as well as the provision of the full Digital Aerial Survey (DAS) report prior to consultation, has meant that we have been able to provide more detailed advice to inform the EIA Report and is welcomed.

Assessment approach

The EIA Report should consider the impact of all phases of the proposed development on the receiving environment, including effects from pre-construction activities as well as the construction, operation and maintenance and decommissioning phases. We recommend that the following aspects are considered further and included in the EIA Report.

Scoring criteria

The proposed approach for the assessment methodology is set out in Section 4.4, which includes high level detail on the scoring criteria to be used, with some further information provided in the receptor chapters – noting that for most receptors this is not particularly prescriptive. Although we acknowledge that expert judgement is required when determining sensitivity of receptors and (in some instances) magnitude of impact - in terms of biodiversity, the magnitude of change should generally be expressed in absolute terms and relatively in terms of percentage change to habitat area or species population. Therefore, at this stage we reserve judgement on the scoring criteria to be used in the EIA Report.

Ornithology assessment

We have concerns from the information provided within the Scoping Report and pre-application discussions with the Applicant, that our guidance notes are not being followed for the ornithology assessment. Therefore, we request that where there is any deviation from our guidance, agreement is reached prior to application submission.

Ecosystem assessment

Increasingly, there is a need to understand potential impacts holistically at a wider ecosystem scale in addition to the standard set of discrete individual receptor assessments. This assessment should focus on potential impacts across predator prey interactions. This will enable a better understanding of the consequences (positive or negative) of any potential changes in prey distribution and abundance from the development of the wind farm on bird and mammal (as well as other top predator) interests and what influence this may have on population level impacts.

Climate change and carbon costs

The impact of climate change effects should be considered, both in futureproofing the proposal design as well as how certain climate stressors may work in combination with potential effects from the proposed wind farm. The EIA Report should also consider the carbon cost of the wind farm (including supply chain) and to what extent this is offset through the production of green energy. We note the intention to provide a climate change assessment as part of the WDA EIA Report, with further details provided within Chapter 19 of the Scoping Report, which is welcomed.

Blue carbon

In addition to the climate change assessment outlined in Chapter 19, we recommend that consideration is given to impacts on blue carbon and whether or not an assessment can be undertaken. This should expand on the information and assessment conducted for benthic

ecology to focus on the potential impacts of the proposal on marine sediments and coastal habitats.

Cumulative impact assessment

The proposed approach to the cumulative effects assessment (CEA) is outlined in Section 4.4.3 of the Scoping Report. Paragraph 201 indicates that where likely significant effects for the proposed development alone are assessed as negligible, these will not be considered within the CEA. However, we advise that proposal alone impacts could be deemed negligible, but when combined with others the overall magnitude could be greater and therefore result in a cumulative effect. As such we advise that further consideration should be given to negligible proposal alone impacts in the CEA. We recognise that aspects of this are discussed in receptor-specific chapters of the EIA Scoping Report and we provide further advice in the appendices below.

Mitigation

We welcome the identification of embedded mitigation measures in each of the relevant chapters of the EIA Scoping Report and summarised in Appendix A (Mitigation Register).

However, we note that much of the embedded mitigation measures includes the development and adherence to post-consent plans and programmes. Plans and programmes themselves do not strictly constitute mitigation – it is the measures contained within the plan that will mitigate impacts, for which no detail has yet been provided.

Mitigation measures can often be most successful when they are considered from the outset of the proposal rather than as a late-stage solution. Therefore, in some cases, mitigation can be incorporated as designed in measures that are truly embedded to avoid / reduce impacts.

We advise that the EIA Report must clearly articulate those mitigation measures that are informed by the EIA (or HRA) and are necessary to avoid or reduce predicted significant adverse environmental effects of the proposal.

We recommend that the full range of mitigation and monitoring measures as well as published guidance are considered and discussed in the EIA Report.

EIA Report

The EIA Report provides the assessment to support the application and should be suitably structured with appropriate formatting and sufficient information, with limited repetition, to ensure it can be reviewed efficiently and effectively. Consideration should therefore be given to the following aspects:

- It should clearly follow the direction provided in the Scoping Opinion, or where specific agreement was later reached during the pre-application process. Any divergence from this needs to be laid out separately and must be fully justified, as well as being raised in pre-application discussions.
- Consideration should be given to the volume and flow of information within and across each receptor chapter and associated technical appendices. The flow of information relating to impact pathway, assessment and conclusions should be concise, but not omit key information or steps taken. Repeated duplication of text should be avoided through appropriate structuring.
- In electronic versions of the EIA Report, navigational aids including use of hyperlinks etc. are required, particularly where there are supporting technical appendices to any chapters.

- Each stage of the assessment process should be sufficiently transparent to allow the assessments to be repeated. Where specific tools have been used, details of which version and when the assessment was carried out is required.

Habitats Regulations Appraisal (HRA) and nature conservation Marine Protected Areas (ncMPA)

We welcome submission of the HRA Stage 1 and ncMPA Screening Reports alongside the EIA Scoping Report as this enables us to consider and provide advice under each assessment process at the same time. We provide advice to help inform HRA and ncMPA requirements for marine ornithology, marine mammals, benthic ecology, diadromous fish and geodiversity features in each of the relevant appendices.

Positive effects for biodiversity and nature inclusive design

We recommend early consideration of potential inclusion of positive effects for biodiversity as well as nature inclusive design. Whilst it is not currently a policy requirement, as part of the need to address both the climate and biodiversity crises, we encourage Applicants to consider this as part of their submission.

Natural heritage interests to be considered

We provide advice as detailed below within receptor-specific appendices for key natural heritage interests to be considered in the EIA Report:

- Advice on marine physical environment is provided in **Appendix A**.
- Advice on benthic ecology is provided in **Appendix B**.
- Advice on fish and shellfish ecology is provided in **Appendix C**.
- Advice on marine mammals is provided in **Appendix D**.
- Advice on offshore ornithology is provided in **Appendix E**.
- Advice on Seascape, Landscape and Visual Impact Assessment (SLVIA) is provided in **Appendix F.**

Further information and advice

We hope this advice is of assistance to help inform the Scoping Opinion, noting that there may be aspects where some further engagement is required to assist in preparing the EIA Report and RIAA.

Please contact me in the first instance for any further advice, using the contact details below, copying to our marine energy mailbox – marineenergy@nature.scot.

Yours sincerely,

Kim McEwen
Marine Sustainability Adviser - Sustainable Coasts & Seas
Kim.mcewen@nature.scot

NatureScot advice on EIA Scoping Report for the MachairWind Offshore Windfarm

Appendix A – Physical processes

Physical processes is considered within the marine physical environment section (Chapter 6) of the EIA Scoping Report. Geodiversity features of nature conservation Marine Protected Areas (ncMPAs) have also been considered in Section 3 of the ncMPA Screening Report (Appendix H).

Scoping questions to consultees have been set out in Section 6.13 of the Scoping Report – within our advice we have used text boxes to clearly identify the questions which are relevant to us.

The final question, included for each receptor, is regarding other matters or information sources – Do you have any other matters or information sources that you wish to present? – we respond to this question within our advice below, under appropriate headings.

Our advice with respect to the geodiversity element of the ncMPA Screening Report is also provided below.

Study area

The study area is based on the maximum tidal excursion extent from the WDA, which extends to 23km in a southerly direction and a 'short distance' in all other directions as per Paragraph 282 and Figure 6.1, however we note that this short distance is not defined. It is stated that the tidal excursion extent has been estimated from publicly available data and encompasses the area for which suspended sediment could be transported following disturbance to the seabed – we are content with the study area proposed, but request that the 'short distance' is identified within the assessment.

Baseline characterisation

Data sources

Have all the relevant data sources been identified in this Scoping Report?

Existing data sources are provided in Table 6.3 and site-specific survey data in Table 6.4 – it is noted that these will be used to inform the EIA.

We are content that the combination of existing data sources and site-specific surveys should provide adequate information to characterise the baseline environment.

Impact pathways

Do you agree with the marine physical environment impacts that have been scoped in and out from further consideration within the EIA?

The potential impacts proposed to be scoped in and out of the assessment are detailed in Table 6.7. We are generally content with these, subject to our comments below.

It is noted in the table that 'Impacts on mixing and stratification' is proposed to be scoped out for all phases. However, in Table 6.2 it states that "*Changes to ocean stratification has been scoped into the EIA"* following advice from MD-SEDD. We would support this aspect being scoped in.

The potential impact on 'seabed morphology and bedload sediment transport' and the potential impact on 'bedload sediment transport' are not well differentiated (Table 6.7). We recommend that these two impacts are merged into one for the EIA to provide a more holistic assessment of

these impacts. Furthermore, seabed bedforms should be considered as a receptor for this merged impact as changes to them could affect receptors in other EIA chapters.

Approach to assessment

Do you agree with the receptors outlined?

Some information has been provided on potential receptors in Section 6.12, which we are generally content with. Following the Scoping Workshop, we advised that in addition to Annex 1 reef, the Coastal Geomorphology feature (saltmarsh) of Gruinart Flats Site of Special Scientific Interest (SSSI) and the Dalradian feature (bedrock cliffs) of Glac na Criche SSSI and Gruinart Flats SSSI should be included as receptors, which they have, and we welcome.

In addition, as advised above, seabed beforms should be considered as a receptor for the potential impact on 'seabed morphology and bedload sediment transport'.

Do you agree with the proposed approach to assessment with specific reference to numerical modelling?

It is noted in Section 6.12 that the assessment of effects on marine environment receptors will be based on a combination of numerical models and a Source-Pathway-Receptor conceptual model.

We are not yet able to confirm whether this is appropriate as no further detail is provided and therefore strongly recommend further consultation as soon as possible on the modelling methodology.

Cumulative impact assessment

Section 6.10 notes that the CEA will follow the approach outlined in Chapter 4 (Approach to Scoping and EIA), which appears appropriate. It is also noted that the Applicant will seek agreement with MD-LOT on the list of projects and/or plans to be included in the CEA, which we support.

Mitigation and monitoring

Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigation the potential effects of the WDA on marine physical environment receptors?

We welcome the identification of embedded mitigation described in Section 6.8 and summarised in Appendix A (Mitigation Register).

However, as noted in the cover letter, much of the embedded mitigation includes adherence to post-consent plans / programmes. Plans do not strictly constitute mitigation as it is the measures contained within the plans / programmes that will mitigate impacts for which no detail has yet been provided.

Furthermore, just to note that should significant effects be identified during the EIA, the embedded mitigation measures detailed in Section 6.8 may not be sufficient to mitigate impacts.

Transboundary / cross-boundary impacts

We agree that transboundary impacts on marine physical environment receptors can be scoped out from further consideration.

Nature Conservation Marine Protected Areas (ncMPA) screening report

An ncMPA Screening Report (Appendix H) has been provided alongside the Scoping Report. Having reviewed the information contained within the screening report – we agree that geodiversity features of all the ncMPAs considered can be screened out from further assessment.

NatureScot advice on EIA Scoping Report for the MachairWind Offshore Wind Farm

Appendix B – Benthic ecology

Benthic ecology interests are considered in Chapter 8 of the EIA Scoping Report and associated appendices (B, C, D and E). Benthic features are also considered within Section 4 of the HRA Screening Report and Section 3.1 of the ncMPA Screening Report (Appendix H).

Scoping questions to consultees have been set out in Section 8.13 of the Scoping Report – within our advice we have used text boxes to clearly identify the questions which are relevant to us.

The final question, included for each receptor, is regarding other matters or information sources – Do you have any other matters or information sources that you wish to present? – we respond to this question within our advice below, under appropriate headings.

Our advice with respect to the benthic elements of the HRA Screening Report and ncMPA Screening Report is also provided within this appendix.

Study area

The study area is defined by a 23km tidal excursion that extends from the WDA in a predominantly southerly direction. The benthic ecology study area reflects the marine physical environment study area as recommended during Scoping Workshop. As a result, we are satisfied with the study area proposed, whilst reiterating our comment above in the physical processes advice.

Baseline characterisation

Do you agree with the characterisation of the existing environment?

Section 8.7 provides information in relation to the existing environment using publicly available data sources along with site-specific survey data. We are content with the information presented, noting that the survey data provides good coverage of the WDA, particularly with the addition of the third-party (2021) survey work. The results of the Environmental DNA survey (Appendix E) has also been provided to compliment the baseline data, which is welcomed.

Have all the relevant data sources been identified in the Scoping Report?

The proposed data sources and guidance documents as listed in Section 8.4 are comprehensive and reflect our advice during the Scoping Workshop. Therefore, we are content with the data sources identified in the Scoping Report.

Potential impacts

Have all benthic ecology impacts resulting from the WDA been identified in the Scoping Report?

Scoping of potential impacts are discussed in Section 8.9 and we are content that the potential impacts relevant to benthic ecology have been identified.

Do you agree with the benthic ecology impacts that have been scoped in and out from further consideration within the EIA?

We are generally content with the potential impacts that have been scoped in and out of assessment as per Table 8.8 subject to the following comment.

It is noted in Paragraph 371 that "*Impacts which span the entire lifetime of the Project (e.g. permanent habitat loss as a worst case) will only be considered as part of the O&M phase in the*

EIA to avoid duplication. It will be highlighted in the O&M section of the EIAR that impacts such as permanent habitat loss begin to occur in construction and potentially continue during and after decommissioning." Whilst we would normally expect impacts to be scoped in and assessed for all relevant phases of the development, this approach seems pragmatic given the uncertainty around decommissioning activities at this stage. We would expect assessment of this impact to be considered further in a decommissioning plan.

Approach to assessment

Do you agree with the proposed approach to assessment?

The proposed approach to assessment is set out in Section 8.12, which we are generally content with subject to the following comments.

Site-specific surveys

Two site-specific benthic surveys have been undertaken to help characterise the baseline environment and we welcome the inclusion of the Survey Reports (Appendices B – E). However, it would have been useful for the analysis of the surveys to have been incorporated into the Scoping Report to help inform the proposed assessment approach.

Priority Marine Features (PMFs)

A number of PMFs have been recorded within the WDA, although the location and extent / number of individuals found is not clear. For the EIA Report, we recommend including greater detail in relation to which PMFs have been recorded, including locations and numbers. We also advise that assessments should be undertaken for all PMF habitats and species recorded within the WDA[2]. The assessment should quantify, where possible, the likely impacts to PMFs and assess whether this could lead to a significant impact on the national status of each PMF.

Annex I habitats

Whilst it is noted that there are no areas of identified Annex 1 stony reef within the WDA, both surveys identified stony reef with epifauna relating to this habitat, immediately adjacent to the WDA and within the 23km study area. Potential impacts from the proposal could extend into this habitat (and benthic communities) and therefore should be considered further, and if necessary, included for assessment.

Definition of value

With respect to the definitions of value for benthic receptors outlined in Table 8.11, it is advised that Annex I habitats, whether they are in a designated site such as a Special Area of Conservation (SAC) or ncMPA or not, should be considered as 'High' value. As a result, we recommend amending the table to note "Habitats (and species) protected under international law (e.g., all Annex I habitats, regardless of their location). Otherwise, we are generally content with the proposed approach to assessment for benthic ecology.

Cumulative impact assessment

Section 8.10 notes that the CEA will follow the approach outlined in Chapter 4 (Approach to Scoping and EIA), which is largely appropriate.

[2] https://www.nature.scot/professional-advice/protected-areas-and-species/priority-marine-features-scotlands-seas

One aspect that should be considered cumulatively is Electromagnetic Fields (EMF) both within the array and with the export cable and other cables. Whilst there are fewer proposed wind farms on the west coast of Scotland, there are more electricity network cables. There has been a tendency for wind farm proposals to dismiss impacts from EMF from a cumulative perspective. We are concerned that the spatial and temporal scale is not being sufficiently considered cumulatively across the network of cables, including those outwith the proposed development. We therefore advise that EMF impacts should be considered in a cumulative assessment whether requested in the WDA or OfTDA scoping is a moot point as we anticipate there will be one EIA Report to cover all aspects at the application stage.

As with the majority of other receptors, it is noted in Section 8.10 that "*impacts assessed as negligible will not be taken forward to CEA and it is possible that some will be screened out on the basis that they are highly localised or the risk of effects occurring is reduced, given management measures will be in place for the Project and other plans and projects*." We advise that proposal alone impacts could be deemed negligible, but when combined with others, the overall magnitude could be greater and therefore result in a cumulative effect. As such, further consideration should be given to negligible proposal alone impacts in the CEA.

It is also noted in Chapter 4 that the Applicant will seek agreement with MD LOT on the list of projects and/or plans to be included in the CEA, which we support.

Mitigation and monitoring

Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on benthic receptors?

We are content with the embedded mitigation measures proposed in Table 8.7 although as noted previously, the embedded mitigation includes adherence to post-consent plans / programmes that will mitigate impacts for which no detail has yet been provided.

In addition, should significant effects be identified during the EIA, the embedded mitigation measures proposed may not be sufficient to mitigate impacts.

It is stated in Table 3.7 that the minimum target depth for cable burial is 0.5m. This is considerably shallower than what has been employed elsewhere and we are concerned that cables could therefore be vulnerable to re-exposure and damage. Moreover, we generally advise that the minimal target burial depth should be at least 1m to reduce potential EMF impacts.

Transboundary / cross border impacts

Potential transboundary impacts are discussed in Section 8.11 - we are content for transboundary impacts for benthic interests to be scoped out from further consideration.

Habitats Regulations Appraisal (HRA) Screening Report

An HRA Screening Report has been submitted with the Scoping Report, which is welcomed.

Section 4 concludes that as there are no SACs designated for benthic features within the Zone of Influence (ZoI) of the proposal, no European sites designated for benthic features have been screened in for assessment - we agree with these conclusions.

Nature Conservation Marine Protected Areas (ncMPA) Screening Report

An ncMPA Screening Report (Appendix H) has been provided alongside the Scoping Report. Having reviewed the information contained within the Screening Report, we agree that benthic features of the ncMPAs considered can be screened out from further assessment.

NatureScot advice on EIA Scoping Report for the MachairWind Offshore Wind Farm

Appendix C – Fish and Shellfish Ecology

Fish and shellfish ecology is considered in Chapter 9 of the EIA Scoping Report and associated appendices (D and E). Fish are also considered within Section 5 of the HRA Screening Report and within Sections 4 and 5 of the ncMPA Screening Report (Appendix H).

Scoping questions to consultees have been set out in Section 9.13 of the Scoping Report – within our advice we have used text boxes to clearly identify the questions which are relevant to us.

The final question, included for each receptor, is regarding other matters or information sources – Do you have any other matters or information sources that you wish to present? – we respond to this question within our advice below, under appropriate headings.

Our advice with respect to the fish elements of the HRA Screening Report and ncMPA Screening Report is also provided within this appendix.

Study area

Two study areas have been defined for fish and shellfish ecology – the International Council for the Exploration of the Sea (ICES) rectangles 40E3 and 41E3 that overlap with the WDA and the Regional Study Area, bounded by ICES rectangles 45E2, 45E4, 39E2 and 39E4. The latter provides a wider context for the fish species and populations, used to inform impact assessments over long distances (e.g. underwater noise).

In our advice issued following the Scoping Workshop, we indicated that we are content with the study areas proposed. The maximum tidal excursion should also be considered to take account of impacts from suspended sediments and ensure that the local study area covers the full extent of this potential impact.

Baseline characterisation

Data sources

Do you agree that the existing data available to describe the fish and shellfish ecology baseline remains sufficient to describe the baseline environment in relation to the WDA?

The existing data sources proposed to be used to inform the baseline environment are presented in Table 9.3 and the site-specific survey data is presented in Table 9.4. It is noted that site-specific benthic survey data will be used to inform the baseline, including Particle Size Analysis to identify herring spawning and sandeel habitat suitability. In addition, we note that the Environmental DNA survey results will provide context to the baseline. Therefore, we are content that the combination of existing data (including additional sources suggested below) and site-specific surveys should provide adequate information to characterise the baseline environment.

Are there any further desktop datasets which you would recommend are included?

We would also recommend an additional data source relevant to the spatial and temporal movement of migratory fish within the WDA:

- Lilly, J. et al. (2024). Migration patterns and navigation cues of Atlantic salmon post-smolts migrating from 12 rivers through the coastal zones around the Irish Sea. Journal of Fish Biology, 104(1), 265–283. https://doi.org/10.1111/jfb.15591

The following data sources are also recommended for basking shark:

- Austin, R.A, et al. (2019). Predicting habitat suitability for basking sharks (Cetorhinus maximus) in UK waters using ensemble ecological niche modelling. Journal of Sea Research, Volume 153, 101767, ISSN 1385-1101.
- Thorburn, James, et al. (2024) Assessing the Potential of Acoustic Telemetry to Underpin the Regional Management of Basking Sharks (Cetorhinus Maximus). Animal Biotelemetry, vol. 12, no. 1, 12 July 2024, https://doi.org/10.1186/s40317-024-00370-5.
- Government of Ireland (2024) Aerial Surveys of Cetaceans and Seabirds in Irish waters: Occurrence, distribution and abundance in 2021-2023.
- Government of Ireland (2024) The seasonal distribution and abundance of seabirds, cetaceans and other megafauna off the south and southwest Irish coast.
- Paxton, C.G.M., et al. (2014a). Statistical approaches to aid the identification of Marine Protected Areas for minke whale, Risso's dolphin, white-beaked dolphin and basking shark. Scottish Natural Heritage Commissioned Report No. 594.
- Paxton, C.G.M., et al. (2014b). Review of available statistical approaches to help identify Marine Protected Areas for cetaceans and basking shark. Scottish Natural Heritage Commissioned Report No. 573.
- Scottish Marine Animal Stranding Scheme (SMASS)

Receptors

Section 9.7 sets out the baseline environment, including the fish and shellfish species typically expected in proximity to the WDA. This includes marine fish (including basking shark), diadromous fish and shellfish. Maps of spawning / nursery grounds are included for commercial fish species.

The survey data provides good coverage of the WDA, particularly with the additional data from previous surveys (2021), giving more confidence in the baseline characterisation.

Our interest in fish and shellfish species relates to those species that are PMFs as well as key prey species (such as herring, sandeels etc.) noting that many of these are also PMFs. A list of marine fish and shellfish scoped in for further assessment is provided in Paragraph 414, which includes all the species recorded within the WDA - we are content with this.

It is noted in Section 9.7.1.2 that diadromous fish may pass through the WDA and provides a list of species to be included for assessment, all of which are PMFs. Although, not explicitly stated – we advise that all these species should be scoped in for further assessment.

Information in relation to basking sharks, recorded through site-specific DAS, is included in Section 9.7.2.2. Given the number of sightings from other data sources in the area, we agree that basking shark should be scoped into the EIA for further assessment.

Designated sites

It is noted in Section 9.7.3 that the WDA does not overlap with any designated site for fish or shellfish species. However, the Sea of Hebrides ncMPA and the Loch Sunart to the Sound of Jura ncMPA could potentially be impacted by the proposal. Therefore, we agree that these designated sites should be scoped in for further assessment.

We note that a HRA Screening Report has also been submitted alongside the Scoping Report, which will consider SACs designated for fish species. However, we raise that diadromous fish

species should be assessed through the EIA only and not through HRA. Further advice on the screening of ncMPAs and SACs is provided below.

Impact pathways

Do you agree that all potential impacts have been identified for fish and shellfish ecology?

Do you agree with the potential impacts scoped in and out?

Section 9.9 identifies potential impacts from the WDA during the construction, operation and maintenance, and decommissioning phases. We are generally content with the list of potential impacts to be scoped in and out of assessment, subject to the following comments.

Our understanding from the information provided in Table 9.9 is that the potential impact of fish aggregation around the WTGs and other hard structures is included for assessment within the 'introduction of hard substrate' impact. We agree that this potential impact needs to be scoped in for further assessment and will need to be considered with other receptors in mind, e.g. marine mammals and ornithology.

For the potential impacts during decommissioning in Paragraph 440, we agree that these could be similar to construction impacts. However, until we better understand the extent to which structures will be decommissioned and how, it is too early to make the assumption that the impact will likely be lower.

Approach to assessment

Do you agree with the proposed approach to the EIA?

We are generally content with the approach to assessment for fish and shellfish ecology set out in Section 9.12 of the Scoping Report, subject to the following comments.

Underwater noise modelling

We welcome the inclusion of underwater noise modelling for fish species using Popper et al., (2014) thresholds**.** As indicated in Paragraph 455, we note that particle motion is to be considered qualitatively within the EIA Report. We are currently content with this approach, noting this may change when further research on particle motion is available.

Priority Marine Features

We advise that in relation to all fish and shellfish PMF species, the assessment should quantify, where possible, the likely impacts and should assess whether the proposal could lead to a significant impact on the national status of the PMF.

Vessel collision risk

The vessel collision risk assessment for basking shark will be qualitative in consideration of the DAS data, sightings records and the worst-case number of vessel passages and routes anticipated for the WDA over the construction phase – we are content with this approach.

Changes in prey availability

Potential inter-related effects are discussed generally within Section 4.4.2.6 of the Scoping Report.

We advise that the EIA Report should clearly set out impacts to key prey species (such as sandeel, herring, mackerel and sprat) and their habitats arising from the proposal alone and cumulatively.

The PrePARED (Predators and Prey Around Renewable Energy Developments) project[3] may be helpful in the understanding of predator-prey relationships in and around offshore wind farms.

Cumulative impact assessment

It is stated in Section 9.10 that the approach to assessment of potential cumulative impacts is set out in Chapter 4 (Approach to Scoping and EIA), which appears appropriate.

As highlighted in our benthic advice, one aspect that we advise should be considered cumulatively is EMF - both within the array and with the export cable and other cables. Whilst there are fewer proposed wind farms on the west coast of Scotland there are more electricity network cables. There has been a tendency for wind farm projects to dismiss impacts from EMF from a cumulative perspective. We are concerned that the spatial and temporal scale is not being sufficiently considered cumulatively across the network of cables, including those outwith the proposed development. Therefore, we advise that EMF impacts should be considered in a cumulative assessment whether requested in this WDA or the OfTDA scoping is a moot point as we anticipate there will be one EIA Report to cover all aspects at the application stage.

As already highlighted in our advice, it is noted in Section 9.10 that "*impacts assessed as negligible will not be taken forward to CEA and it is possible that some will be screened out on the basis that they are highly localised or the risk of effects occurring is reduced, given management measures will be in place for the Project and other plans and projects*." We advise that proposal alone impacts could be deemed negligible, but when combined with others, the overall magnitude could be greater and therefore result in a cumulative effect. As such, further consideration should be given to negligible proposal alone impacts in the CEA.

It is also noted in Chapter 4 that the Applicant will seek agreement with MD LOT on the list of projects and/or plans to be included in the CEA, which we support.

Mitigation and monitoring

Embedded mitigation is presented in Table 9.8 and whilst the majority of the mitigation presented isn't directly related to fish and shellfish, implementation of these measures could indirectly reduce the potential impacts on fish and shellfish.

As noted in our advice for other receptors – the embedded mitigation proposed largely includes adherence to post-consent plans / programmes that will mitigate impacts for which no detail has yet been provided.

In addition, should significant effects be identified during the EIA, the embedded mitigation measures may not be sufficient to mitigate impacts.

For basking shark, we advise that any mitigation for marine mammals should also be applied to basking sharks. Furthermore, if Uncrewed Surface Vehicles (USVs) or Autonomous Underwater Vehicles (AUVs) are to be used then we recommend further consultation to agree on appropriate mitigation for basking sharks (and also marine mammals).

[3] PrePARED Project: https://owecprepared.org/

Transboundary / cross border impacts

We agree that the potential for transboundary impacts should be scoped in for fish and shellfish receptors until underwater noise modelling has been undertaken.

Habitats Regulations Appraisal (HRA) Screening Report

An HRA Screening Report has been submitted with the EIA Scoping Report, which is welcomed.

Section 5 discusses the screening process in relation to sites designated for diadromous fish and notes that, as per NatureScot advice at the Scoping Workshop, potential impacts on diadromous fish will be assessed as part of the EIA only.

We advise that for diadromous fish species there is limited knowledge of distribution and behaviour of these species in the marine environment and thus it is not possible to carry out an assessment of impacts to diadromous fish to the level required under HRA. Therefore, at this time we advise that diadromous fish species should be assessed through EIA only and not through HRA.

Nature Conservation Marine Protected Areas (ncMPA) Screening Report

An ncMPA Screening Report (Appendix H) has been provided alongside the Scoping Report. Section 3.2 of the Screening Report considers sites designated for fish species and concludes that basking shark of the Sea of Hebrides ncMPA and flapper skate of the Loch Sunart to the Sound of Jura ncMPA should be screened in for further assessment – we agree with these conclusions.

NatureScot advice on EIA Scoping Report for the MachairWind Offshore Wind Farm

Appendix D – Marine mammals and turtles

Marine mammal and turtle interests are considered in Chapter 10 of the EIA Scoping Report and associated appendices (E, F & G). Marine mammal species are also considered within Section 6 the HRA Screening Report and Sections 3 and 4 of the ncMPA Screening Report (Appendix H).

Scoping questions to consultees have been set out in Section 10.13 of the Scoping Report – within our advice we have used text boxes to clearly identify the questions which are relevant to us.

The final question, included for each receptor, is regarding other matters or information sources – Do you have any other matters or information sources that you wish to present? – we respond to this question within our advice below, under appropriate headings.

Our advice with respect to the marine mammal elements of the HRA Screening Report and ncMPA Screening Report is also provided within this appendix.

Study area

The proposed study area is defined in Section 10.6 as the WDA, with wider consideration of each species in the context of their relevant Management Unit (MU).

We advise that the study area should be the WDA plus the 10km DAS buffer and that the wider study area should be the UK portion of each marine mammal species MU.

Baseline characterisation

Data sources

Do you agree with the proposed data sources? Are there any further data sources to be aware of?

Existing data sources are provided in Table 10.3 and site-specific survey data in Table 10.4 – we are content that the combination of existing data sources and site-specific surveys should provide adequate information to characterise the baseline environment.

We welcome the presentation of marine mammal results in the Environmental DNA Report (Appendix E), which reflects and compliments the baseline data.

Do you advise to use the updated draft marine mammal underwater noise thresholds from National Marine Fisheries Service (NMFS)(2024), or the thresholds published in Southall et al., (2019)?

At present we are advising to continue using the NMFS (2018) / Southall et al. (2019) thresholds for assessments as we are not yet in a position to recommend using the NMFS 2024 thresholds. If our position changes, we will inform relevant stakeholders, including the Applicant.

Density estimates

Do you agree with the marine mammal species to be scoped in, the reference populations, and the densities to be used for assessments?

All species of marine mammals that are identified in the DAS should be scoped in for assessment.

We advise that density estimates are generated from site-specific DAS and then the most precautionary estimate between SCANS IV and DAS is used for the assessment. If there are no density estimates available from SCANS IV, or the SCANS III modelled density surfaces are significantly higher, then SCANS III should be used instead. If this is not available, we can accept Waggitt, et al. (2019). If no density estimates are available, then we would advise assessing the species qualitatively.

Proposed marine mammal density estimates are provided in Table 10.5. It is noted in Paragraph 486 that *"For all species except harbour porpoise, the most precautionary densities are proposed to be used…For harbour porpoise, as recommended by NatureScot (Table 10.2), the SCANS IV estimate will be used instead of the most precautionary, as it is the most recent desk-based source and is a higher density estimate compared to the results from the Project's DAS".* This advice was given at the Scoping Workshop prior to the full DAS results being available. Therefore, we advise that the DAS density estimate of 0.253/km^2 should be used instead of the 0.201/km^2 SCANS IV estimate as it would be more precautionary.

In addition, we advise that the highest density recorded for every species should be used, not the seasonal average, except for common dolphin. This is due to the presence of common dolphin super pods recorded within the WDA. Although the super pods could be incidental and not representative of the area all year round, there remains the possibility that this is an area that is important for common dolphin life history.

A new survey report[4] from the ObSERVE Programme has just been published, which could provide additional context in terms of seasonal migration of common dolphins on the west coast and we encourage the developer to continue engagement with the Hebridean Whale and Dolphin Trust (HWDT) to add further context to the assessment of this species.

For the bottlenose dolphin density estimate, we advise that the SCANS IV block CS-F (0.0425/km^2) should be used – it appears that the figure from the adjacent block (CS-G) has been presented in the Scoping Report. For white-beaked dolphin, we are content with the use of the adjacent block CS-G (0.254/km^2) as there is no density estimate available for block CS-F in SCANS III or IV.

As noted in Table 10.5, both grey and harbour seals will be assessed quantitively using Carter et al. (2020) density estimates, which we support. Just to note, we appreciate the difficulty involved in positively identifying seals to species level from DAS. However, we do not agree with the approach of apportioning unidentified marine mammals to the most common species.

Reference population

In relation to the reference populations, we advise use of the population estimates for the UK portion of the Inter-Agency marine Mammal Working Group (IAMMWG) MUs rather than the full MUs for species with very large MUs. This is to present the most realistic assessment of numbers of animals affected by the proposal in Scottish waters. The MUs for most species are very large and in most cases are too big for a meaningful understanding of impacts to potentially impacted populations. Although we acknowledge this is based on a non-biological delineation, we feel that using the UK portion of the MU better reflects the likely size of populations affected by the potential impact pathways.

[4] ObSERVE Programme: https://www.gov.ie/en/publication/12374-observe-programme/

The use of population estimates for the full MUs are still useful for context and baseline characterisation. Therefore, we advise stating the total MU population for context and then assessing impacts against the UK portion of the MU.

Receptors

The list of marine mammal and turtle species proposed to be scoped into the assessment is provided in Section 10.7.1 and we are generally content with those listed. We agree that quantitative assessments should be undertaken where density estimates are available (as advised above).

It is noted in Paragraph 485 that a single leatherback turtle was recorded during the DAS in September 2022. However, our understanding from the DAS report was that in addition to this individual, six leatherback turtles had been recorded in April 2021 within the proposal area. Therefore, we agree that leatherback turtle should be included in the assessment.

Table 6.1 of the HRA Screening Report notes that otter have been screened into the onshore assessment only. Having reviewed the indicative design envelope parameters for the monopile foundations in Table 3.3, we advise that until underwater noise modelling is undertaken then potential impacts to otters should be scoped into the EIA and HRA. Although the WDA is approximately 9km away from the coast, underwater noise impacts could reach the inshore area where otters forage and cause disturbance. Therefore, potential impacts to otters from underwater noise should be considered within the EIA.

Potential impacts

Do you agree with the potential impacts scoped in and out?

We are broadly content with the scoping in and out of impacts as per Table 10.7 subject to the following comments.

We agree that auditory injury from operational noise, other construction activities and vessels may be scoped out based on the underwater noise modelling results. We would not usually expect this continuous, non-impulsive noise to be loud enough to exceed Permanent Threshold Shift (PTS) for any of the functional hearing groups. However, our advice is that if the underwater noise modelling shows that the PTS thresholds could be exceeded then it should be scoped in.

In addition, we advise that geophysical surveys should be scoped into the assessment. Whilst we acknowledge that European Protected Species (EPS) licences will be sought for these activities separately (as with unexploded ordinance (UXO) clearance and piling), they should also be considered within the EIA.

Approach to assessment

Do you agree with the approach to underwater noise modelling, and the thresholds to be used?

Do you agree with the proposed approaches to assess the potential for disturbance due to underwater noise?

Unexploded ordinance (UXO)

The proposed approach to assessing underwater noise impacts from UXO clearance is set out in Section 1.1.1 of Appendix G (Marine Mammals and Turtles Approach to Assessment), which we are broadly content with. It is stated in Paragraph 8 that an EPS licence will be sought for UXO

clearance if there is a potential for significant disturbance to result in a population level effect. We advise that in Scotland an EPS licence is required if the potential disturbance to any individual of any species cannot be ruled out (inshore regulations).

Impact piling

Underwater noise modelling for piling is set out in Section 1.1.2 (Appendix G), which we are generally content with. In relation to the assessment of disturbance from underwater noise impacts, Paragraph 20 states that "*The marine Scotland (2020) guidance specifies disturbance as occurring if the activity is likely to "significantly affect the local distribution or abundance of the species to which it belongs". The relevant European Commission guidance (2007) suggest that disturbance must significantly impact the local distribution or abundance of a species, including temporary impacts. The JNCC* et al. *(2010) guidance proposes that "any action that is likely to increase the risk of long-term decline of the population(s) of (a) species could be regarded as disturbance under the Regulations".*

We welcome the consideration of both temporary and long-term impacts to disturbance on marine mammals referring to the above guidance.

Dose response curves

It is acknowledged (Section 1.1.2.2.1, Appendix G) that the use of harbour porpoise dose response (Graham et al. 2017) on all cetaceans is precautionary, however in the absence of species-specific dose response curves, it is the preferred approach for EIA.

In relation to seals, we are content with the use of Whyte et al. 2020 for both species – should the updated dose response for harbour seal become available (Whyte et al. 2022) then we advise that both are presented for harbour seal for comparison and consistency between developments.

Effective Deterrence Ranges (EDR)

We advise that any approach proposed for Northern Irish waters or sites are agreed with DAERA prior to assessment.

It is noted in Paragraph 31 (Appendix G) that there are a number of papers that provide potential disturbance ranges from piling (and other activities) that could be used to inform an assessment of disturbance. We would welcome both EDRs and dose response underwater noise modelling to be presented to allow comparison. However, we appreciate this may add to the work required and thus advise that if only one approach is taken forward, it should be the use of the dose response underwater noise modelling approach.

Population modelling

Paragraph 33 (Appendix G) states that population modelling (iPCoD) will be undertaken to determine the population level consequences of disturbance due to piling and will be conducted for all species where there is the required information to support an assessment – we welcome this approach. This should be undertaken for the proposal alone and cumulatively with other developments / activities.

Vessel interaction

We welcome the approach outlined in Section 1.2.4 (Appendix G) to assess vessel interaction and look forward to seeing this in the EIA Report.

Sensitivity and magnitude

The approach outlined in relation to magnitude (Section 10.12, Scoping Report), where the proportion of the potentially impacted population is considered in defining the magnitude of impact to each species is welcomed. Furthermore, we agree that proportion alone should not exclusively define the magnitude of impact as the thresholds drawn could become arbitrary.

We are broadly content with the definitions of magnitude detailed in Table 10.8, which were the same as those presented at the Scoping Workshop. However, the narrative in Section 10.12.2 is drawn from non-Scottish EPS guidance and is therefore not relevant for assessing impacts on population effects for EIA in Scotland.

It is noted from Section 10.12.3 that the value of the receptor is listed in the bullets describing the factors influencing sensitivity. However, it does not seem to have been included in the definition of sensitivity level in Table 10.9 (Definitions of sensitivity levels for marine mammals). Value is then described in Section 10.12.4 where it is noted that just because a species is of high value, it does not make them more sensitive and as all species of marine mammal have high value, the value will only be looked at as a modifier for the sensitivity assigned "*where relevant".* For clarity, we can accept value being used as a modifier, as we advise that value should be included, so as to acknowledge the inherent value / importance of these species, which are given a high level of legislative protection through the Habitats Regulations.

In relation to auditory injury impacts from underwater noise (piling and UXO clearance), we expect to see a sensitivity score of High for all cetacean species. This is due to the known importance of hearing function to these species, the uncertainty of this impact in the long term as well as the high vulnerability and low recoverability of individuals from the impact.

In relation to disturbance from piling, we would expect a sensitivity scoring of Medium and for disturbance from UXO clearance we would expect a score of Low or Negligible due to the short duration of impact, particularly if using low order deflagration techniques.

EPS Licence requirements

For marine mammals, we expect the assessment to focus on impacts to cetaceans under EIA legislation. However, there is also a need to consider impacts to cetaceans within an EPS context, as far as reasonably practicable.

We do not expect a full EPS Risk Assessment at this stage but an understanding of the implications for cetaceans from the proposal under inshore regulations, together with mitigation options. This will provide confidence, should the proposal be consented, that any impact is able to be addressed through a subsequent derogation under EPS licensing. In our experience, leaving this entirely to the post-consent stage can lead to difficulties and delays.

Cumulative impact assessment

Do you agree with the approach to cumulative assessments, and the use of population modelling?

We advise that all impacts are considered cumulatively regardless of the significance of potential impact on marine mammals from the proposal alone assessment. This is because an impact could be of higher significance cumulatively when scaled up from other Projects within the species management unit.

Due to the location of this proposal, we advise that Northern Irish offshore developments are considered in the cumulative assessment as well as Scottish developments.

We recommend including all projects up to a year on either side of the proposal, looking at both temporal and spatial overlap, and advise use of iPCoD to assess the long-term impacts cumulatively for the species it is available for. Where underwater noise outputs are not available for other projects, we can accept the use of EDRs.

If the CEF is published within the proposal timeframe then we recommend that it is used to undertake the cumulative assessment.

Mitigation and monitoring

Do you agree that the embedded mitigation measures described provide a suitable means or managing and mitigation the potential effects of the WDA on marine mammal receptors?

We welcome the identification of embedded mitigation described in Section 10.8 and summarised in Appendix A (Mitigation Register).

However, as noted previously, much of the embedded mitigation includes adherence to post-consent plans / programmes. Plans do not strictly constitute mitigation as it is the measures contained within the plans / programmes that will mitigate impacts for which no detail has been provided yet.

Furthermore, should significant effects be identified during the EIA, the embedded measures detailed in Section 10.8 may not be sufficient to mitigate impacts.

We advise that if any Uncrewed Surface Vehicles (USVs) or Autonomous Underwater Vehicles (AUVs) are to be used, further advice should be sought to agree appropriate mitigation for marine mammals (and basking sharks).

Monitoring can help reduce the level of precaution within assessments and accelerate the consenting process by providing more proportionate and meaningful EIAs. At this time, it is unknown which or how many offshore wind farm proposals are likely to be consented and of these, will be constructed. As a result, we are encouraging all Applicants to consider post-consent monitoring to help contribute to strategic projects to help fill knowledge gaps that can be addressed in the most efficient and cost-effective way.

Transboundary / cross border impacts

We advise that there could be transboundary impacts to the Republic of Ireland from underwater noise impacts and therefore, the National Parks and Wildlife Service should be consulted for further advice. We provide advice above in respect of cross border considerations and the requirement to liaise with DAERA.

Habitats Regulations Appraisal (HRA) Screening Report

An HRA Screening Report has been submitted with the Scoping Report, which is welcomed.

As noted above, it is intended that otters will be considered as part of the onshore assessment so have not been included within this Scoping Report or HRA Screening Report. Having reviewed the indicative design envelope parameters for the monopile foundations in Table 3.3, we advise that until underwater noise modelling is undertaken, potential impacts to otters should be scoped into the EIA and HRA. Although the WDA is approximately 9km away from the coast, underwater noise

impacts (particularly from piling), could reach the inshore area which otters rely on for foraging and cause disturbance. Therefore, we advise that SACs designated for otter, that have connectivity to the coast and fall within the range of potential impact, are included for further assessment.

Table 6.2 summarises the SACs and qualifying species that have been screened into the HRA – we are content with this, subject to our comment above regarding otters. However, we note and agree that this list should be reviewed once the underwater noise modelling has been undertaken.

Just to note, we advise that screening of cetaceans (100km) and seals (50km for harbour and 20km for grey seal) should be from the impact rather than the WDA boundary for Scottish sites. We also advise the Applicant to look at telemetry studies (SMRU) to understand connectivity beyond the screening ranges used for seals (50km/20km as detailed above).

Potential impacts screened in and out of assessment for marine mammals are detailed in Table 6.3 – all impacts considered for HRA screening should be the same as those considered for the EIA Report.

In relation to the proposed assessment of in-combination effects (Section 6.4.1), all impacts screened in for Likely Significant Effect (LSE) should be included and we are content with the approach set out. As highlighted above for the CEA, if underwater noise outputs are not available for other projects, we can accept the use of EDRs for the in-combination assessment.

We are generally content with the approach set out for assessing cross border effects (Section 6.4.2) and welcome further agreement with us and DAERA, once more detail is available on the potential impacts from the proposal. We also advise liaison with the Irish Parks and Wildlife Section to ensure any transboundary issues are adequately addressed.

Nature Conservation Marine Protected Areas (ncMPA) Screening Report

An ncMPA Screening Report (Appendix H) has been provided alongside the Scoping Report and we agree that minke whale of the Sea of Hebrides ncMPA should be screened in for assessment.

It is noted in Paragraph 35 that "*where MUs for a given species extend over a very large area (e.g. minke whale and Risso's dolphin over the Celtic and Greater North Sea MU), it is proposed that the assessment will focus on the appropriate SCANS IV (Small Cetaceans in European Atlantic Waters and the North Sea) Block CS-H which provides a more accurate estimate of the population*." We are content with this approach - that a more precautionary SCANS estimate is used for the adjacent block due to the fact that the ncMPA sits within both CS-F and CS-H as well as considering the densities presented in Paxton et al. (2014)[5].

Table 4.3 details the impacts screened in for minke whale as a designated species of the Sea of Hebrides ncMPA and we are generally content with these. However, we advise that underwater noise from geophysical survey works should also be scoped in for assessment.

---

[5] Paxton, C.G.M., Scott-Hayward, L.A.S. and Rexstad, E. (2014a). Statistical approaches to aid the identification of Marine Protected Areas for minke whale, Risso's dolphin, white-beaked dolphin and basking shark. Scottish Natural Heritage Commissioned Report No. 594.
Paxton, C.G.M., Scott-Hayward, L.A.S. and Rexstad, E. (2014b). Review of available statistical approaches to help identify Marine Protected Areas for cetaceans and basking shark. Scottish Natural Heritage Commissioned Report No. 573.

NatureScot advice on EIA Scoping Report for the MachairWind Offshore Wind Farm

Appendix E – Offshore ornithology

Ornithology interests are considered in Chapter 11 of the EIA Scoping Report and supporting appendices (I and J). Ornithological species are also considered within Section 7 of the HRA Screening Report and Section 3.4 of the ncMPA Screening Report (Appendix H).

Scoping questions to consultees have been set out in Section 11.13 of the Scoping Report – within our advice we have used text boxes to clearly identify the questions which are relevant to us.

The final question, included for each receptor, is regarding other matters or information sources – Do you have any other matters or information sources that you wish to present? – we respond to this question within our advice below, under appropriate headings.

Our advice with respect to the ornithology elements of the HRA Screening Report and ncMPA Screening Report is also provided within this appendix.

Study area

The proposed study area for ornithology (Section 11.6) consists of a 4km buffer around the WDA, which follows our advice given at the time of the DAS survey commencement and thus we are content with this.

Just to note, our updated guidance[6] now recommends a 6km buffer for commercial scale developments to prevent influence of edge effects at 4km when modelling marine bird distribution across a site. However, for clarity and as stated above, we are content with the 4km buffer proposed as previously agreed.

Baseline characterisation

Data sources

Do you agree that the existing data available to describe the offshore ornithology baseline remains sufficient to describe the baseline environment in relation to the WDA?

Existing data sources are provided in Table 11.3 and site-specific survey data is presented in Table 11.4. We are content that the combination of existing data sources (including the additional sources suggested below) and site-specific surveys should provide adequate information to characterise the baseline environment.

Are there any further desktop datasets which you would recommend are included?

We would also recommend the following data source is considered in relation to ornithology should it be published within the proposal timescales:

- JNCC are currently undertaking an update to the demographic rates presented in Horswill and Robinson (2015)[7]. The report update is due to be published imminently, and we will provide an update to our Guidance Notes in light of this in due course.

[6] NatureScot Guidance Note 2: Guidance to support Offshore Wind Applications: Advice for Marine Ornithology Baseline characterisation Surveys and Reporting. https://www.nature.scot/doc/guidance-note-2-guidance-support-offshore-wind-applications-advice-marine-ornithology-baseline

[7] JNCC: Review of Seabird Demographic Rates and Density Dependence (2015) - https://hub.jncc.gov.uk/assets/897c2037-56d0-42c8-b828-02c0c9c12d13

We are currently in the process of updating our Collison Risk Guidance Note[8], which will include updated parameters published in the Joint SNCBs' collision risk note[9] that was published this year (2024).

Site-specific DAS

Particular attention should be given to possible presence of cryptic species and nocturnally active species (e.g. shearwaters and petrels), which may not be recorded effectively using standard survey methods.

It is noted that 116 European storm petrels and 13,413 Manx shearwaters have been recorded throughout the DAS programme and given that both species are also active at night, the number of birds present in the WDA may well be higher. This is also noteworthy as breeding colonies for both species are located relatively close to the WDA, with birds of both species coming ashore to breeding colonies in the hours of darkness. For nocturnally active species, which may not be recorded effectively using standard survey methods – sources giving distributions of seabirds at sea can be used as a general guide to species that are likely to be present, from Stone et al. (1995) and Waggitt et al. 2019 mapping[10] and tracking studies[11].

Do you agree that the impact assessment should be based only on the Project's DAS and that the third-party DAS data should be excluded (i.e. third-party data should only be used to inform the baseline characterisation?)

In pre-application meetings with the Applicant, it has been noted that there is a gap in the Project's DAS data for December 2021. We requested that the Applicant explore whether this gap could be filled with information from the third-party DAS data, with any potential implications of this noted. Our understanding from the most recent meeting (held 2 October 2024) is that this has not been undertaken. Therefore, we advise this is undertaken prior to the assessment being carried out – we would be happy to discuss this further with the Applicant via written correspondence or a meeting if required.

Potential impacts

Do you agree that all potential impacts have been identified for offshore ornithology?

Do you agree with the potential impacts scoped in and out for the EIA?

The potential impacts proposed to be scoped in and out of the ornithology assessment are presented in Table 11.6. However, we note the absence of key impacts, which have not been identified in the Scoping Report, these are detailed below - we advise that these are scoped in for assessment.

[8] NatureScot Guidance Note 7: Guidance to support Offshore Wind Applications: Marine Ornithology – Advice for assessing collision risk of marine birds. https://www.nature.scot/doc/guidance-note-7-guidance-support-offshore-wind-applications-marine-ornithology-advice-assessing

[9] JNCC: Joint advice note from the SNCBs regarding bird collision risk modelling for offshore wind developments (2024). https://hub.jncc.gov.uk/assets/f7892820-0f84-4e96-9eff-168f93bd343d

[10] Waggitt, J. et al (2019). Distribution maps of cetacean and seabird populations in the North-East Atlantic. Journal of Applied Ecology: Vol 57. https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2664.13525

[11] ProcBe Project: https://jncc.gov.uk/our-work/procbe/

Temporary disturbance and displacement

Table 11.6 provides details of the potential impact of '*temporary disturbance and displacement*', including from vessel disturbance during operation and maintenance activities. It is noted in the table that details of the proposed assessment of this potential impact is included in Appendix I (Offshore Ornithology Methods Statement), however we note that this is not the case.

Disturbance and displacement from vessel movements should be assessed during all phases of the proposal (construction, operation and maintenance, and decommissioning) as vessels transiting between ports / harbours and the WDA, may potentially cause disturbance to birds using their preferred foraging areas. This will be of particular importance if the ports used could result in impacts on sea duck and diver qualifying species of Special Protection Areas (SPAs) such as the Sound of Gigha SPA. Mitigation measures may help to reduce these disturbance impacts, such as avoidance of key sensitive periods during the annual cycle, agreed transit routes etc..

If vessels are likely to transit through such locations, we recommend that the assessment process for disturbance includes the following:

- Information on likely vessel routes, lie-up / sheltering areas, numbers of vessel trips and types of vessels.
- Information on existing / baseline vessel traffic and the potential increase in traffic due to the proposal.
- Sensitivity of qualifying species to vessel disturbance.
- Densities and distribution of sensitive bird species throughout the SPA and consideration of how potential vessel traffic may impact on higher bird densities.
- Extent of the SPA and qualifying species populations likely to be affected by vessel disturbance.
- Reference to a Vessel Management Plan and the embedded mitigation measures contained within the plan that are relevant to birds.
- Consideration of additional mitigation measures relevant to this potential impact.

Lighting attraction and disorientation

Species such as European storm petrel and Manx shearwater, which have been recorded during DAS, are vulnerable to both lighting attraction and disorientation. As well as turbine lighting, servicing or construction vessels, particularly if construction or operation and maintenance works are undertaken on a 24-hour basis, are also of concern. Therefore, we advise the potential impact of lighting attraction and disorientation should be scoped in for assessment.

We would expect the assessment to be qualitative and note that the impacts of light attraction and disorientation may also be linked to, or further compound, the impacts associated with collision risk and distributional responses – this should also be considered. Deakin et al. (2022) [12] may be helpful in guiding the assessment.

[12] Deakin, Z., Cook, A., Daunt, F., McCluskie, A., Morley, M., Witcutt, E., Wright, L., and Bolton, M. 2022. A review to inform the assessment of the risk of collision and displacement in petrels and shearwaters from offshore wind developments in Scotland. Scottish Government Report. https://www.gov.scot/publications/review-inform-assessment-risk-collision-displacement-petrels-shearwaters-offshore-wind-developments-scotland/pages/2/

Unexploded ordnance clearance

UXO clearance presents a risk to seabirds both directly and indirectly during the pre-construction / construction phase. Detonation of UXO may directly risk injury or death to seabirds within the vicinity of the detonation. Therefore, we expect direct impacts of UXO clearance on seabirds to be assessed within the potential impact '*temporary disturbance and displacement'.*

As noted above, UXO clearance also presents an indirect impact to seabirds in relation to underwater noise impacts on prey species. This impact should also be included within the assessment.

Approach to assessment

Availability bias

A report (Dunn et al. 2024)[13] has recently been published that presents new availability bias correction factors for auks and red-throated diver. We are currently reviewing this and will update our guidance shortly if appropriate. Depending on proposal timescales, this may be relevant for this proposal – we will keep the Applicant informed.

Collision risk assessment

In Section 2.3.2.4 of Appendix I, we note that the Applicant refers to NatureScot Guidance Note 7 for avoidance rates to use in collision risk modelling until updated guidance becomes available. We are currently in the process of updating our collision risk guidance - this will include an update to the avoidance rates and we will inform the Applicant as soon as this information is available.

SeabORD

Section 11.12, Paragraph 565 outlines the approach to the assessment of potential impacts of the proposal on offshore ornithology receptors, with reference to the information provided in Appendix I. This paragraph also refers to the SeabORD tool, which can be applied to assess kittiwake, guillemot, razorbill and puffin. We note that in Appendix I (Paragraph 94), it is stated that this impact will be assessed using the matrix approach only in the EIA. While we note the version available limits the number of colonies that can be assessed, the information provided in the Scoping Report does not set out which colonies this could or could not be used for. We recommend this is considered further for each species, to determine if it is appropriate to use SeabORD to assess impacts at the regional population scale in the EIA. This should be discussed and agreed with us prior to application submission.

Population Viability Analysis (PVA) / Biologically Defined Minimum Population Scale (BDMPS)

It is highlighted in Paragraph 564 that it is unclear how to combine relevant regional population scales (i.e. combining breeding and non-breeding season impacts to create an annual estimate). PVAs only consider the annual consequences of impacts on a population. Therefore, an annual change in baseline survival or mortality rate needs to be presented. Breeding and non-breeding seasons are identified as follows:

[13] Dunn, R.E., Duckworth, J., O'Brien, S., Furness, R.W., Buckingham, L., Daunt, F., Bogdanova, M., Green, J.A. 2024. Temporal and spatial variability in availability bias has consequences for marine bird abundance estimates during the non-breeding season. *Ecological Solutions and Evidence*: 5(4). https://besjournals.onlinelibrary.wiley.com/doi/full/10.1002/2688-8319.12373

- Breeding season: birds are strongly associated with nest site – nesting, egg laying and provisioning young.
- Non-breeding season: birds are more widely dispersed and not strongly associated with nest site. This period subsumes the 'breeding site attendance' periods defined in our seasonal definition's guidance.

Non-breeding season apportioning is dependent on information within BDMPS (Furness, 2015)[14]. Where BDMPS seasons overlap with NatureScot breeding seasons, the BDMPS seasons should be foreshortened. For some species the BDMPS identifies a single non-breeding (winter) period, for others there are also Autumn and Spring migration BDMPS that should be used.

For example, for gannet: NatureScot breeding site attendance period in the second half of February and the first half of March becomes part of the non-breeding season. The main breeding season is as per NatureScot guidance – the second half of March to the end of September. BDMPS for gannet is divided into separate Autmn and Spring migration periods – September-November and December-March. The Spring period is foreshortened to exclude the second half of March to align with NatureScot guidance. There is no migration-free winter period for gannet.

For additional interpretation of this we have accepted Berwick Bank Offshore Wind Farm's definition of seasons (EIA Appendix 11.5) and the West of Orkney Windfarm additional information submission, which also sets out how the BDMPS season has been aligned with our non-breeding season.

Deviations from guidance

Do you agree with the use of 30 samples of aerial bird densities being used in collision risk modelling, or should aerial bird densities from incomplete seasons be excluded from the analyses?

Following the Scoping Workshop, held in May 2024, we provided written advice (email sent 23 May 2024) regarding the use of 30 samples from site-specific DAS for collision risk modelling. Within this advice, we highlighted concerns around this approach and requested the Applicant consider the potential for any skew of density estimates introduced by including incomplete survey months. We would have expected that a summary of a comparison of density estimates from complete and incomplete months and between survey years be presented within the Scoping Report to help inform our decision making and understand the effects of the alternative approach.

If the information we previously requested can be provided, and all parties agree that this does not skew the data, then we may be able to agree with the inclusion of the full 30 samples from the DAS for collision risk modelling. In addition, as noted above, the outstanding question on whether the missing proposal DAS data (December 2021) can be filled using the third-party DAS data should also be addressed.

Where there is any deviation from our guidance, we request agreement with us and the Applicant, either during a meeting or via written correspondence. In the case of any agreed deviation from our guidance, we request that the outcomes of the alternative approach are presented in

[14] Furness, R.W. 2015. *Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS)*. Natural England Commissioned Reports, Number 164. https://publications.naturalengland.org.uk/publication/6427568802627584

comparison with the outcomes following our guidance, to clearly show the differences derived from the application of the differing approaches.

Migratory species

Do you agree with the scoping out of the migratory species listed in Appendix I Offshore Ornithology Methods Statement?

We agree with the scoping out of the migratory species listed in Appendix I - our understanding is that these are:

Table 1. Migratory species screened out from further assessment.

East Atlantic' light bellied brent goose (North Greenland/Svalbard)
Dark bellied brent goose (Western Siberia/Western Europe)
'Svalbard' barnacle goose (Svalbard/South west Scotland)
Taiga bean goose 'European' white fronted goose (NW Siberia and NE/NW Europe)
Bewick's swan
Nightjar
Stone curlew
Avocet
Black tailed godwit (*limosa*)
Red necked phalarope
Wood sandpiper
Bittern
Honey buzzard
Marsh harrier
Montagu's harrier

Highly Pathogenic Avian Influenza (HPAI)

There is no mention of HPAI in the Scoping Report or the HRA Screening Report. We advise that there is a need for ongoing engagement in relation to the impacts of HPAI and how to incorporate these impacts within the assessment. Work is continuing within NatureScot to provide further information and guidance, which will be available in due course. In the meantime, we expect the impact of HPAI on colonies to be considered qualitatively, particularly when reviewing PVA outputs.

As the DAS work straddles the timing of the HPAI outbreak it will be important for assessment purposes to consider the current status of seabird populations at SPA colonies. Surveys have been undertaken at a number of key seabird colonies in 2023, co-ordinated by RSPB, some of which were repeated in 2024. Recent data for key species at some sites can be found on the SMP database. In addition, the RSPB have published a report (Tremlett et al. 2024)[15] on HPAI effects, which will provide useful context.

[15] Tremlett, C.J., Morley, N., and Wilson, L.J. (2024). UK seabird colony counts in 2023 following the 2021- 22 outbreak of Highly Pathogenic Avian Influenza. RSPB Research Report 76. RSPB Centre for Conservation Science, RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL. https://www.rspb.org.uk/birds-and-wildlife/seabird-surveys-project-report

Cumulative impact assessment

Potential cumulative effects are considered in Section 11.10 of the Scoping Report. Paragraph 546 states that a quantitative assessment of cumulative effects will consider other operational offshore wind farms, while a qualitative assessment will consider offshore wind farms that have submitted scoping reports, as well as other projects in the vicinity of the WDA.

The quantitative assessment of cumulative effects should consider any project which has determined estimates of mortality impacts to relevant species and should not be limited to offshore wind farm projects. A full list of projects proposed to be considered in the CEA should be agreed with MD LOT and should include (but not limited to) tidal energy, aquaculture and cables, using species-specific foraging ranges to determine connectivity with seabirds most likely to use the WDA.

Our current guidance requires proposals that have submitted a Scoping Report to be assessed qualitatively however, just to note that this guidance is due to be updated in early 2025 and any changes to the current approach should be followed for the EIA if it is within proposal timescales.

Mitigation and monitoring

Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on offshore ornithology receptors?

We welcome the identification of embedded mitigation, and a number of measures have been described in Section 11.8 and summarised in Appendix A (Mitigation Register).

However, as noted previously, much of the embedded mitigation includes adherence to post-consent plans / programmes. Plans do not strictly constitute mitigation as it is the measures contained within the plans / programmes that will mitigate impacts for which no detail has been provided yet.

Furthermore, should significant effects be identified during the EIA, the embedded measures detailed in Section 11.8 may not be sufficient to mitigate impacts.

At this stage, we consider there to be scope for additional mitigation measures to be identified. Regarding species attracted to and / or disorientated by artificial light sources – as noted above, we recommend considering the findings of Deakin et al. (2022). Additionally, we advise that protocols are built into the construction and operational phases for monitoring and handling of any birds attracted to infrastructure or vessels by lighting, as well as recording of any such incidents.

We also recommend including a Vessel Management Plan (VMP) covering all phases of the proposal, which includes consideration of disturbance to marine birds. The VMP should consider most likely ports and harbours to be used for vessels transiting to and from the WDA during construction, operation and maintenance, and decommissioning phases. The mitigation measures contained within the VMP may help to reduce these potential disturbance impacts, for example by avoiding sensitive times of the annual cycle.

Transboundary / cross border impacts

The approach to assessing transboundary impacts is described in Section 11.11. We welcome the approach to scoping in potential impacts to seabirds breeding at SPA colonies in the Republic of Ireland in both the breeding and non-breeding season.

Cross border impacts from the proposal are also likely to include potential impacts to SPAs in Northern Ireland, England and Wales, as well as protected sites in the Isle of Man. It may be possible to scope out impacts to certain SPA colonies based on sufficient evidence (such as tracking studies), however this should be agreed in advance with MD LOT and NatureScot.

Habitats Regulations Appraisal (HRA) Screening Report

An HRA Screening Report has been submitted with the Scoping Report, which is welcomed.

Sites designated for marine ornithological features are discussed in Section 7. Paragraph 166 describes the Applicant's approach to determining LSE with respect to qualifying seabird species of an SPA, wherein the approach only considers connectivity to an SPA as the determining factor. This approach does not consider the impact-receptor pathways between the WDA and SPA qualifying species, as would be the expected approach to determining LSE, and as set out in our guidance.

The approach undertaken is explained in Section 7.1.2 and states that an LSE screening matrix approach is not required when following our guidance. However, we advise that the LSE screening matrix should be used to determine which SPAs and features have theoretical connectivity and an impact pathway.

The site-specific DAS data is also available, which should be used to determine if the species are present within the WDA (and buffer). This provides a clear, transparent audit trail for each site.

The lack of an LSE screening matrix means that we are unable to follow the impact-receptor pathways being assessed or identify which potential impacts are being considered for each species at each SPA.

Screening of breeding colonies in the breeding and non-breeding season

We welcome the step to calculate the shortest distances by sea when determining connectivity between the WDA and SPAs designated for seabird species in Section 7.4.2.1. However, there are inconsistencies in the values presented and it is unclear how the distances were determined as there is no explanation of the method used, for example:

- There are no land masses between the WDA and North Colonsay and Western Cliffs SPA, therefore it is unclear why the non-Euclidean distance is greater than the straight-line distance.
- It is unclear why the distance between the WDA and Rum SPA increases by 14.2km when using the non-Euclidean distance, relative to the straight-line distance.

In light of the above, we request an explanation of how these distances were calculated and the reasoning behind calculating by-sea distances for certain SPAs when there are no land masses between them and the WDA.

In screening SPAs to be considered for LSE, the shortest distance between the boundary of the WDA and the boundary of the SPA should be measured. The distance between the geometric centre of the WDA and the geometric centre of the SPA should be used for the purposes of apportioning in the EIA and not used to screen SPAs out of the assessment at any stage. It is unclear from the HRA Screening Report where the distance between the WDA and SPA has been measured.

Paragraph 120 of the HRA Screening Report and Paragraph 48 of Appendix I correctly refers to our guidance, stating that guillemot are likely to remain in the vicinity of their breeding colonies throughout the non-breeding season and the non-breeding season population is defined using the breeding season foraging range. This also applies to herring gull, which do not migrate in the UK, as described in Furness (2015).

Using the breeding season foraging range to determine connectivity between the WDA and herring gull from SPA colonies in both the breeding and non-breeding seasons results in no SPA colonies being identified as having connectivity in the WDA. As such, herring gull should be assessed through the EIA only, as impacts cannot be attributed to SPA colonies with connectivity to the WDA.

We acknowledge the statement in Paragraph 189 that common gull are not assessed in Furness (2015), therefore common gull should be assessed through the EIA only as impacts cannot be attributed to SPA colonies with connectivity to the WDA.

Paragraph 196 states that ten SPAs were screened into the assessment of LSE for lesser black-backed gull. However, we note that only nine SPAs are included in Table 7.11.

Potential impacts

As highlighted above for the EIA, we note the absence of key impacts that have not been identified in Section 7.3 of the HRA Screening Report. Additionally, we have concerns over the presentation of potential pressures on seabird species taken in their entirety from FeAST without an assessment of which pressures are relevant to the proposal.

As per our advice above for the EIA Report, the potential impacts of lighting attraction and disorientation should be considered during all phases of the proposal, particularly with respect to European storm petrel and Manx shearwater.

UXO clearance impacts should be scoped in for seabirds, both directly and directly, during the pre-construction / construction phases.

Temporary disturbance and displacement has not been screened in as an impact within the HRA Screening Report, despite being scoped in as an impact in the EIA Scoping Report. We advise it should be included.

We welcome the use of FeAST in Section 7.3.1 to identify potential pressures on seabirds from offshore wind farms and the impact pathways associated with these pressures. However, we are concerned with the approach to include all potential pressures to seabirds without consideration of which pressures would be relevant to offshore wind farm developments. Furthermore, the Applicant does not provide detail of the impact pathways associated with each of the pressures obtained from FeAST. We note that the Applicant has acknowledged that the FeAST tool is not yet fully functional and the list of pressures on seabirds will be further refined as some are not relevant.

Summary / conclusion of LSE

As highlighted above, Section 7.2.1 incorrectly states that a summary of LSE screening using a matrix approach is not required for the HRA Screening Report. As a matrix has not been provided, there is no LSE conclusion on any qualifying species of any SPAs based on impact pathways. As such, the conclusion that LSE cannot be ruled out has been determined for all qualifying species of SPAs with theoretical connectivity to the WDA. We consider this to be the longlist of SPAs (and

qualifying species) with potential for LSE and expect further consideration of the impact pathways present for each species after this longlist has been defined. For example, by presenting impacts and receptors in an LSE matrix table, similar to that presented for marine mammals in Table 6.5, Section 6.

Migratory collision risk

Can stakeholders provide an update on when the next stage of the "Strategic study of collision risk for birds on migration and further development of the stochastic collision risk modelling tool" project will be complete?

We advise that the Applicant consult with Marine Directorate for further clarification on this study and the associated work packages.

In-combination assessment

Section 7.5 describes the approach to the in-combination assessment. Paragraph 252 outlines the approach to identifying the requirement of a PVA to assess the long-term impacts of a potential reduction in adult annual survival on an SPA population. We agree with the described approach, however, note that this does not refer to the scenario when an in-combination PVA is not required if the proposal alone impacts result in an annual morality of <0.2 birds per annum. Annex A of this appendix outlines the requirement to run a PVA in more detail.

Non-breeding season impacts

Advice is requested from NatureScot on how to undertake the non-breeding season apportionment of impact to SPAs using the BDMPS approach where there is more than one non-breeding season.

Further to our EIA scoping advice, provided above. In relation to attributing impacts of distributional responses, displacement and barrier effects to non-breeding season BDMPS populations, impacts should be assessed against the mean seasonal peak abundance estimates for relevant species. The season defined for mean seasonal peak abundance estimates are those as per Furness (2015) BDMPS populations, foreshortened to fall within the NatureScot defined non-breeding season (where these overlap with NatureScot breeding seasons). If this method is followed, the predicted mortalities from these impacts are determined for each BDMPS within the non-breeding season as defined by NatureScot.

Diver species

Section 7.4.2.1 presents the SPAs designated for breeding and wintering seabirds with theoretical connectivity to the WDA. Red-throated diver and great northern diver are included in this section and not in Section 7.4.2.2 - SPAs for terrestrial migratory birds. However, we note that red-throated diver, great northern diver and black-throated diver are included in Appendix I as terrestrial migratory species. Great northern diver is also included in Appendix I as a key seabird species. We also note that black-throated diver was included in Appendix I but is not included in the HRA Screening Report. Clarity on where and how these species are being assessed should be provided to ensure a transparent audit trail.

Nature Conservation Marine Protected Areas (ncMPA) Screening Report

An ncMPA Screening Report (Appendix H) has been provided alongside the Scoping Report. We have reviewed the information provided in Section 3.4 and agree that there is no connectivity to black guillemot of the Clyde Sea Sill ncMPA for the WDA, but this will need to be considered for the OfTDA when this is scoped.

Annex A

Identifying the requirement for PVA – NatureScot Guidance Update

Within both EIA and HRA, the predicted impacts of offshore wind developments need to be considered against relevant marine bird populations. The primary method used for assessing the population consequences in these assessments is PVA.

Our advice on the requirement for PVA is as follows:

Proposal alone impacts

- PVAs will be required for all sites and species where the proposal alone impacts equal or exceed a 0.02 percentage point change in combined breeding and non-breeding season adult survival rate (*i.e. a ≥0.02 percentage point decrease in survival rate or a ≥ 0.02 percentage point increase in mortality rate*).
- This could apply to any level of proposal alone mortality, though in reality it is unlikely that a very low proposal alone mortality will meet this threshold. However, annual adult mortality and changes in adult survival rate values should be presented for all sites and species, thereby providing clarity on when PVA is required.

In-combination impacts

- PVAs will generally be required for all sites and species where the in-combination impacts equal or exceed a 0.02 percentage point change in combined breeding and non-breeding season adult survival rate. (i.e. a ≥0.02 percentage point decrease in survival rate or a ≥ 0.02 percentage point increase in mortality rate).
- **The exception to this is where the proposal contribution to the in-combination impact is less than 0.2 birds per annum**. In this case the impact from the individual proposal is deemed to not make a tangible contribution to the in-combination impacts and therefore a PVA is not required.
- Where the proposal contribution is less than 0.2 birds per annum, a table should be provided that details by site and species the percentage point changes in adult survival rate and the number of birds impacted per annum. This is to allow for this data to be used in future in-combination assessments for other developments, where necessary.

The threshold of 0.02 percentage point decrease in adult annual survival rate applies to both EIA and HRA assessments.

Figure 1 below illustrates this process and example scenarios are shown in Table 1.

Figure 1. Identifying the requirement for PVA.

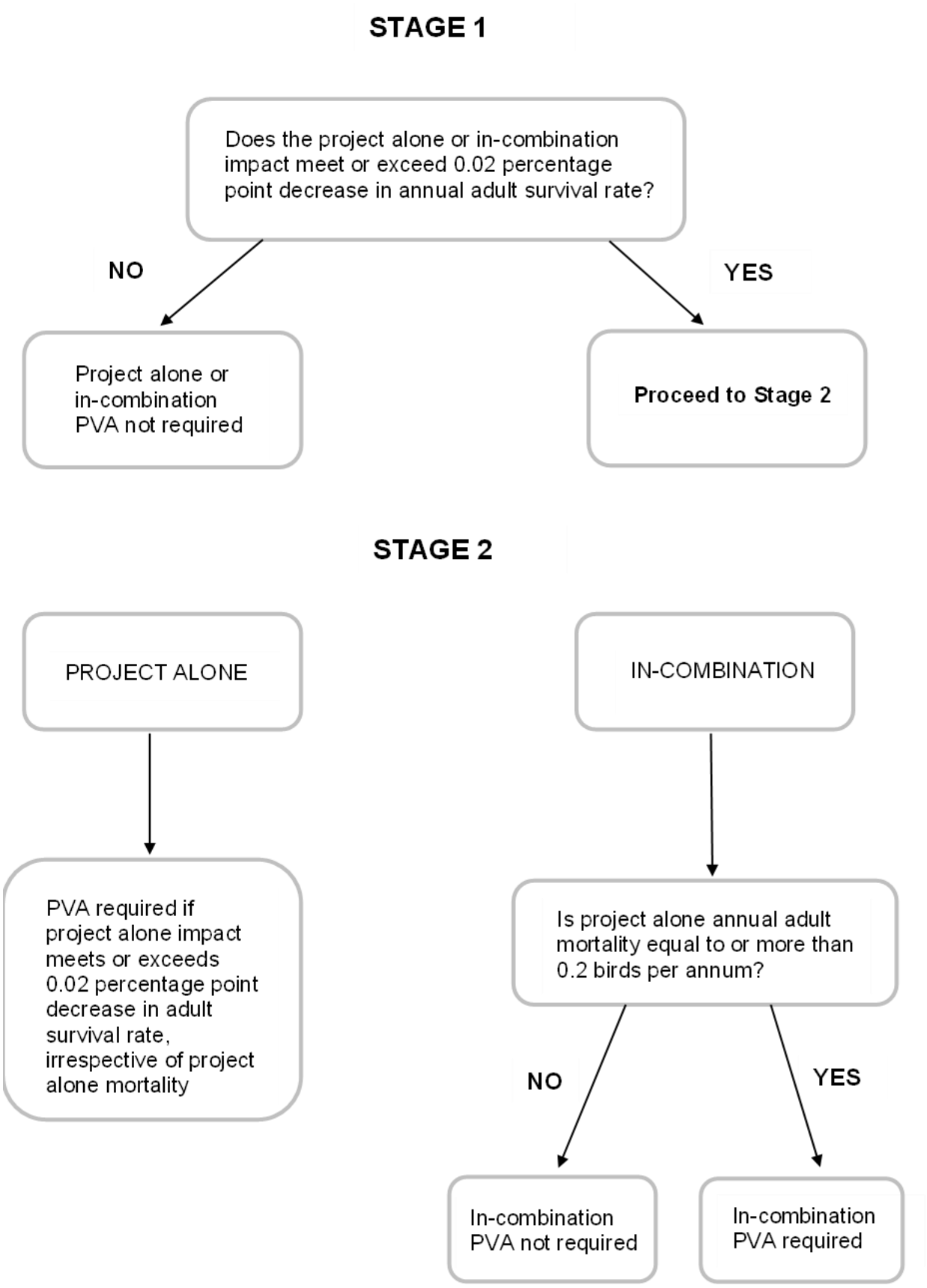


Table 1. Scenarios for PVA thresholds.

Proposal alone percentage point decrease in annual adult survival rate	In-combination percentage point decrease in annual adult survival rate	Proposal alone estimated mortality (birds per annum)	Proposal alone PVA required?	In-combination PVA required?
<0.02	<0.02	any	No	No
<0.02	≥0.02	<0.2	No	No
<0.02	≥0.02	≥0.2	No	Yes
≥0.02	≥0.02	≥0.2	Yes	Yes

Context for the 0.2 birds per annum threshold

The 0.2 birds per annum threshold for in-combination PVA comes from Secretary of State advice and is in line with the rest of the UK.

This threshold may be considered precautionary. However, it is important to look at PVA counterfactuals even when there is only a small project contribution, as we consider this along with several other factors, including:

- Proposed development scale and location
- Colony and species-specific contextual elements
- Long-term colony trends
- Short-term colony trends
- Species life history
- Proportional importance of species in Scotland and UK
- HPAI and mortality event impacts (e.g. wrecks)
- Climate change sensitivity
- Confidence in the environmental impact assessment undertaken

Due to the high number of offshore wind proposals currently being developed, there is potential for even very small additional mortality to be of concern for certain species at certain sites.

NatureScot advice on EIA Scoping Report for the MachairWind Offshore Windfarm

Appendix F – Seascape, Landscape and Visual Impact Assessment (SLVIA)

Seascape, Landscape and Visual interests are considered in Chapter 16 of the Scoping Report.

Our advice focusses on landscapes considered to be Nationally important. Our scoping advice is to ensure that all relevant information in relation to SLVIA is included for and that the assessment captures all potential impacts on landscapes of National Importance.

Scoping questions to consultees have been set out in Section 16.13 of the Scoping Report - within our advice we have used text boxes to clearly identify the questions which are relevant to us.

The final question, included for each receptor, is regarding other matters or information sources – Do you have any other matters or information sources that you wish to present? – we respond to this question within our advice below, under appropriate headings.

Study area

Is the proposed SLVIA Study Area appropriate?

The proposed study area is detailed in Section 16.6, and we consider that a 60km study area for the SLVIA is appropriate.

Baseline information

Have all the relevant data sources been identified in the Scoping Report?

We are content that all relevant data sources relating to capturing impacts on landscapes of National Importance have been included in Table 16.3.

Potential impacts

Do you agree with the seascape, landscape and visual impacts and receptors that have been scoped in and out from further consideration within the EIA?

The impacts proposed to be scoped in for seascape, landscape and visual interests are detailed in Table 16.5 and we are generally content with these, subject to the following comments.

Whilst the Jura, Scarba, Lunga and the Garvellachs Wild Land Area (WLA 05) is proposed to be scoped out of the assessment, we consider that there is a clear commonality between some Special Landscape Qualities (SLQs) of the Jura National Scenic Area (NSA) and Wild Land Qualities (WLQs) of WLA 05, with WLQs providing additional information and context for the SLQs. Therefore, we advise that the relevant WLQs of WLA 05 be drawn upon to inform the assessment of effects on special landscape qualities (AESLQ).

Approach to assessment

Are there any comments on the proposed list of assessment viewpoint locations and/or suggested visualisations?

It is noted that the additional viewpoints suggested following the Scoping Workshop have largely been included as per Table 16.6 and we are satisfied with the use of wirelines only for viewpoints 18 and 24, Scarba and Staffa respectively. However, we would advise that viewpoint 10, representative of the west coast of Jura, be in visualisation format.

This viewpoint should be sited further east to ensure that effects on the location specific SLQ of the *inaccessible Loch Tarbet*[16] be captured. This would also facilitate easier access for site viewpoint photography.

Are there any further seascape, landscape or visual receptors that should be considered within the assessment (i.e. where it is expected that significant effects may occur)?

In relation to capturing impacts on landscapes of National Importance, we are content that all relevant receptors have been identified.

Do you agree with the proposed approach to coastal character assessment, within 30 km of the WDA?

Based on the information provided, we would reiterate our previous advice (email sent 23 May 2024) and recommend that a 40km radius landscape and coastal character study area be adopted. This is due to the proposed height of the turbines currently being considered, at 340m to blade tip above LAT, and the subsequent pattern of visibility over sensitive coastal landscapes.

Cumulative impact assessment

Are there any comments on the overall methodology proposed to assess effects on seascape, landscape and visual receptors, or to assess cumulative effects?

As noted for other receptors, the approach to assessment of potential cumulative impacts is set out in Chapter 4 (Approach to Scoping and EIA), which appears appropriate. It is also noted that the Applicant will seek agreement with MD-LOT on the list of projects and/or plans to be included in the cumulative effects assessment, which we support. We would like to take this opportunity to highlight that there could be cumulative impacts with the Haven Offshore Array wind farm proposal in Irish waters and this should be considered within the CEA.

Iterative design development and mitigation

The Scoping Report states (Paragraph 136) that seascape, landscape and visual impacts have informed the selection of the reduced WDA boundary taken forward for scoping, as follows "*With respect to seascape, landscape and visual constraints, a minimum buffer of 12km from the nearest islands (Islay and Colonsay) has been implemented to define the eastern and southern extents of the WDA boundary".* Whilst it notes in Table 16.2 that "*Further refinement of the WDA is likely once additional data is collected following the completion of further WDA surveys and studies, as part of the outcomes of the EIA process, including feedback from stakeholders*".

We would like to take this opportunity to reiterate concerns raised in our advice dated 23 August 2023 and 23 May 2024 regarding design considerations as follows:

"In terms of the proposals' indicative form (entire W1 area), we offer the following comments, aware that these issues may reduce, subject to a reduction in the red line area, which could potentially enable greater setback distances from sensitive receptors. We would be happy to work with you and discuss these issues further once more certainty is available as to the design envelope. Our concern with the W1 area remains similar to our comments on the sectoral plan consultation namely:

[16] NatureScot: Jura NSA description and Special Qualities - https://sitelink.nature.scot/site/9129

- *3 national scenic areas (NSA's) curve around the north and east sides of W1. Achieving moderate amounts of theoretical visibility, at similar distances c. 30km which while distant, given the large size of the proposed turbines and the nature of sea views with little screening, (height of turbines over topping Colonsay potentially?) causes us some concern;*
- *The special qualities highlight the frontier character, open Atlantic views, vast natural world and outstanding views and distances over which these views can be obtained and strong maritime influence on these protected landscapes;*
- *Distinctive, strong, and diverse coastal character; and*
- *Proximity to Islay and Colonsay with sensitive visual and landscape receptors.*

Whilst there has been further development of the area boundary within the W1 DPO since the initial meeting last year, based on the information provided this has generally resulted in a similar pattern of visibility over the surrounding coastal landscape to include the Jura NSA, Loch na Keal NSA and Scarba, Lunga and the Garvellachs NSA. We would direct the Applicant to the NatureScot Sectoral Plan Seascape, Landscape and Visual Impact Assessment and Design Guidance[17] which sets out general design principles for reducing effects on sensitive coastal landscapes. This may be of assistance for informing design considerations during the design development stage."

We would welcome further consultation during the design process as proposed in Table 16.2. noting that we do have concerns that mitigation measures may not be sufficient to avoid significant effects on landscapes of National Importance.

It states in Paragraph 832 that the Applicant intends to confirm the final layout design post-consent based on the findings of pre-construction surveys. We advise that where significant effects are identified, these should be resolved as far as possible through adequate consideration of mitigation options as part of the application process and not post-consent.

Transboundary / cross border impacts

Do you agree that transboundary effects can be scoped out?

It is stated in Section 16.11 that the Applicant is proposing to scope out impacts on transboundary receptors – we agree that transboundary impacts can be scoped out from further assessment.

[17] NatureScot: Sectoral Plan Consultation Summary and Design Guidance - https://www.nature.scot/doc/sectoral-plan-consultation-summary-and-design-guidance

Natural England

Date: 30 October 2024
Our ref: 491243
Your ref: SCOP0057

Scottish Government,
Victoria Quay,
Edinburgh,
EH6 6QQ

BY EMAIL ONLY

Lancaster House
Hampshire Court
Newcastle-upon-Tyne
NE4 7YH

T 0300 060 3900

Dear Marine Directorate

MACHAIR WINDFARM
Location: West of Colonsay

Habitats Regulations Appraisal Screening
Environmental Impact Assessment Scoping

Thank you for seeking our advice on the HRA Screening and EIA Scoping in your consultation which we received on 25 October 2024.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

The advice contained within this letter is provided by Natural England, which is the statutory nature conservation body within English territorial waters (0-12 nautical miles). As the application is located in Scottish waters, advice from NatureScot, the statutory nature conservation body in Scotland should be sought.

Having considered the location and scale of the Machair windfarm, we conclude that the project is unlikely to significantly impact any species from English designated sites or waters. We do not expect a requirement to provide further comments or advice on this project unless the project changes substantially.

For any queries relating to the specific advice in this letter only please contact me using the details below. For any new consultations, or to provide further information on this consultation please send your correspondence to consultations@naturalengland.org.uk.

Yours sincerely

Northumbria Marine Team
E-mail: planconsareateamnorthumbria@defra.gov.uk

Joint Radio Company (JRC)

From:	JRC Windfarm Coordinations Old
To:	MD Marine Renewables
Cc:	Wind SSE
Subject:	MachairWind Offshore WF- ScotWind W1 (SCOP0057) [WF487737]
Date:	21 October 2024 15:49:13

Dear scottish,

A Windfarms Team member has replied to your co-ordination request, reference **WF487737** with the following response:

If any details of this proposal change, particularly the disposition or scale of any turbine(s), this clearance will be void and re-evaluation of the proposal will be necessary.

Please do not reply to this email - the responses are not monitored.
If you need us to investigate further, then please use the link at the end of this response or login to your account for access to your co-ordination requests and responses.

Dear Sir/Madam,

***Planning Ref**: SCOP0057*

***Location**: MachairWind Offshore Wind Farm -ScotWind W1 northwest of Islay and west of Colonsay*

***Site Centre NGR**: 111622 689730 (approx.)*

***Development Radius**: 22km (approx.)*

***Hub Height**: 180m (max) **Rotor Radius**: 158m (max)*

*This proposal is **cleared** with respect to radio link infrastructure operated by the local energy networks.*

JRC analyses proposals for wind farms on behalf of the UK Fuel & Power Industry. This is to assess their potential to interfere with radio systems operated by utility companies in support of their regulatory operational requirements.

In the case of this proposed wind energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. However, if any details of the wind farm change, particularly the disposition or scale of any turbine(s), it will be necessary to re-evaluate the proposal.

In making this judgement, JRC has used its best endeavours with the available data, although we recognise that there may be effects which are as yet unknown or inadequately predicted. JRC cannot therefore be held liable if subsequently problems arise that we have not predicted.

It should be noted that this clearance pertains only to the date of its issue. As the use of the

spectrum is dynamic, the use of the band is changing on an ongoing basis and consequently, developers are advised to seek re-coordination prior to considering any design changes.

Regards

Wind Farm Team

Friars House
Manor House Drive
Coventry CV1 2TE
United Kingdom

Office: 02476 932 185

We hope this response has sufficiently answered your query.
If not, please **do not send another email** as you will go back to the end of the mail queue, which is not what you or we need. Instead, **reply to this email by clicking on the link below or login to your account** for access to your co-ordination requests and responses.

https://breeze.jrc.co.uk/tickets/view.php?id=34303

Scottish Fisherman’s Federation

Our Ref: FH-MachairWind-WDA/24-0001

Your Ref: Scoping - MachairWind (ScotWind W1) – SCOP0057

Scottish Fishermen's Federation
24 Rubislaw Terrace
Aberdeen, AB10 1XE
Scotland UK
T: +44 (0) 1224 646944
F: +44 (0) 1224 647058
E: sff@sff.co.uk

www.sff.co.uk

E-mail:
MD.MarineRenewables@gov.scot

22 November 2024

Dear Abby Gray

SFF Response to MachairWind Offshore Wind Farm EIA Scoping & HRA Screening Reports Consultation

This response to the scoping request (SR) is presented by the Scottish Fishermen's Federation on behalf of the 450 plus fishing vessels in membership of its constituent associations, the Anglo Scottish Fishermen's Association, Fife Fishermen's Association. Fishing Vessel Agents and Owners Association, Mallaig & North West Fishermen's Association, Orkney Fisheries Association, Scottish Pelagic Fishermen's Association, the Scottish White Fish Producer's Association and Shetland Fishermen's Association.

General comments

SFF notes from section 3.2 of the MachairWind Offshore Wind Farm (Proposed Development) Scoping report (SR) that Project Design Envelop (PDE) approach (also known as the 'Rochdale Envelope') will be adopted for this SR and the Environmental Impact Assessment (EIA) Report. The PDE will specify the realistic worst-case design and activity parameters where appropriate. These will feed into the EIA to ensure the worst-case scenario can be quantified and assessed. Therefore, the following comments are based on existing details provided in this Scoping Report and further comments will be shared in due course once the Project's designed is finalised.

Specific comments

Wind Turbine Generator (WTGs) foundation/spatial footprint

SFF notes from sub-section 3.4.2 'Wind Turbine Generation Foundations; (p29) of the SR that the PDE presently incorporates options for fixed foundation, and it is possible that more than one type of foundation could be used across the wind farm development area (WDA). The following

foundation design options are currently being considered for WTGs: Monopiles; Jackets on pin piles; Jackets on suction buckets; and Gravity Base Structures (GBS).

Our primary concern is the spatial footprint of the WTGs foundation, therefore, SFF would propose to the Applicant to use the monopile design (which has lesser spatial footprint).

Inter-Array Cables (IAC)
The SFF notes from 'Table 3.7 Indicative design envelope parameters: Inter-Array Cables' (p33) that the maximum width of cable trench will be 5m. However, the SR is not clear about the total width of IAC corridor that would require seabed disturbance (to prepare seabed for cable trench works) and the total seabed areas that will be disturbed during seabed preparation for IAC works. The SFF enquire how many metres of seabed would be disturbed on two sides of cable trench and how much of seabed areas would be disturbed for IAC lay work?

As the maximum total inter-array cable length will be c.450km, we would request that the impacts of the IAC seabed preparation works on marine environment to be scoped in.

Cable Burial and Protection
The SFF notes from sections 3.4.4 'Inter-array cables' (p33) that it is likely that IACs will be buried in the seabed from the cable seabed touchdown point at the base of the WTG foundation. Cable protection may be used at the IAC seabed touchdown point at the base of the WTG foundation, at cable or pipeline crossings, or where an adequate degree of protection has not been achieved from the burial process.

The primary concern of the SFF is fishermen's safety, the SFF would appreciate it if the Applicant could make all efforts to reach the required depth of cable burial. The avoidance of using cable protection measures as much as reasonably practical would also be appreciated as the volume of cable protection mass will disrupt the marine habitat and would create a snagging hazard for fishing vessels within the array area.

In terms of using cable protections, SFF is opposed to using concrete mattresses, grout/rock bags and sandbags in open waters since they create severe snagging hazards for bottom trawl fishing vessels and static gears. SFF's preferred cable protection measure is rock placement/protection considering industry standard rock size (1"- 5") with a 1:3 profile followed by an over-trawl sweep alongside a long-term monitoring programme.

In terms of crossing points, as they create obstacles and a snagging hazard to the fishing industry, SFF would suggest that the cable crossing should be avoided as much as possible. Where avoidance of crossings cannot be avoided, the design of cables and pipelines crossing points should be consulted with fishing the industry to ensure their impacts are mitigated.

Enabling Works - Boulder & UXO Clearance
SFF notes from sub-section 3.5.31 (p35) that the Proposed Development pre-construction activities include boulder and UXO clearance.

Since the relocation of boulders from their natural positions and re-positioning them creates a snagging hazard for fishing vessels, SFF would suggest avoiding the relocation of boulders as much as possible. However, where boulders relocation is unavoidable, we recommend the new locations/coordinates of the relocated boulders should be recorded and shared with fishermen.

Fishermen require geographical readings to decimal of a minute format (3 decimal places sufficient) rather than going down to actual seconds and the datum should be WGS84 rather than ED50.

Where potential UXO are identified, SFF would propose that they may either be avoided (e.g. through re-routing or micro-siting) or deflagrated. UXO detonation at sea is our least preferred option as it will have an adverse impact on fish and shellfish and other marine fauna in the area. Where detonation of UXO is the last resort, we recommend that sufficient mitigation measures (e.g. use of acoustic deterrent device (ADD) …etc) to be undertaken to avoid impact on fishing. The SFF object to relocation of active UXO as they create a safety risk to fishing gears and fishers. However, where passive UXO relocation is unavoidable, we recommend the new locations/coordinates of the relocated UXOs should be recorded and shared with fishermen.

Scour Protection

SFF notes from section 3.4.3 (p33) that Scour material may be required to protect the structural integrity of the fixed WTG foundations from natural hydrodynamic processes. Further information on the scour protection material to be used, if required, will be presented in the EIAR. For fishermen's safety reasons, the SFF objects to the use of concrete mattresses and rock/sand bags in open waters and we propose industry standard graded rocks to be utilised for scour protection.

Decommissioning

SFF notes from section 3.5 (p35), of the SR that the developer is required under Section 105 of the Energy Act 2004 to prepare a Decommissioning Programme for approval by Scottish Ministers. Specific details on the decommissioning activities are not known at this stage of consent but further details will be provided in the Proposed Development EIA Report.

To reiterate our safety concern for fishing vessels, SFF would like to see all development related infrastructures are recovered/removed to shore followed by over-trawl sweeps (seabed sweeps using fishing gears). In addition, the seabed should be restored to its pre-development condition post-decommissioning, and the developer/operator should ensure it is safe for fishing operations to fully resume in the area.

EIA Methodology

SFF is of the view that there are no approved guidelines to set realistic criterion to define the magnitude of impact and sensitivity of receptors for commercial fisheries and referring it to 'expert judgement' would be unrealistic and misleading. Therefore, guidelines need to be adopted in consultation with the fishing industry representatives to address this issue.

In addition, SFF would like to see that the impact of the Development is assessed on individual fishing vessels affected by the Development versus the whole fleet/fishery.

Ch. 8 Benthic Ecology

The following are the SFF's comments on Benthic Ecology chapter:

Q. Do you agree with the benthic ecology impacts that have been scoped in and out from further consideration within the EIA?

SFF's response: No. SFF notes that the 'impacts to benthic ecology due to heat from subsea electrical cables' has not been scoped in. As there is no robust scientific evidence to reject the impacts of heat on benthic ecology; therefore, SFF would like to see the 'Impacts to benthic invertebrates due to

thermal emissions from subsea electrical cables' to be scoped in. Any temperature change in the invertebrate's habitat would have adverse effects on their behaviour and increase their mortality rate.

We propose the 'Disturbance from noise and vibration' to be scoped in as we have concern over the noise effects on juvenile fish and shellfish in the array area.

We also propose that the 'Removal of hard substrates/Remobilisation of contaminated sediment during intrusive works' during construction should be scoped in as 'seabed preparation' for cabling (IACs) require seabed disturbance of at least along each cable. Foundation works also require seabed preparation, based on the size of the foundations, resulting in hard substrate removal.

Ch. 9. Fish and Shellfish Ecology

The following are the SFF's comments on Fish and Shellfish Ecology:

Q. Do you have any other matters or information sources that you wish to be presented in the EIAR?

SFF response: Yes.

Cable footprint and Seabed Spawning Grounds Disturbance

SFF furthermore note from section 9.7.1.3 'Spawning and Nursery Grounds' (p179) that the Scoping Boundary overlaps with the spawning and nursery grounds of some commercially important demersal and pelagic fish species (including, cod, haddock, whiting, herring and sandeel). Therefore, we propose any survey activities and other seabed disturbances should be undertaken outwith spawning and nursery periods of the above-mentioned fish species to avoid juvenile fish mortality.

SFF also note from sub-section 8.7.1 'Subtidal Ecology' (p137, Benthic Ecology) that the Local Benthic Ecology Study Area seabed is suitable for herring spawning. Therefore, the SFF are concerned about the Development impacts on all commercial value fish species in the area, especially on the herring which are also particularly sensitive to noise impacts on hearing through the swim bladder.

We are of the view that any activities on herring spawning habitat are prohibited based on the 'ICES Advice on fishing opportunities, catch, and effort Greater North Sea ecoregion' published 31 May 2024. Therefore, SFF propose the above-mentioned ICES advice to be taken into account and acted upon at determination stage. The link to ICES advice on herring in divisions 6.a.South of 56°N and West of 7°W and 7.b-c is provided as follows: Herring in 6aS and 7a-c.

Ch. 12. Commercial Fisheries

Following are the SFF's comments on Commercial Fisheries Chapter:

Scoping

12.13 SCOPING QUESTIONS TO CONSULTEES

Q • Do you agree with the data sources to be used to characterise the commercial fisheries baseline within the EIA?

SFF Response: SFF appreciates the Applicants commitment to use longer term data in the EIA. We reiterate the importance of pre-Brexit data to be utilised for the EIA Report to present a realistic baseline of fishing activities within the study area, as some types of fisheries have been curtailed post Brexit.

Q • Are there any additional data sources or guidance documents that should be considered?

SFF Response: Fishing plotter data from fishermen, SFF and associations should be used as AIS and VMS data do not represent all fishing activities within the study area. In general collection of fishing plotter data (screen shots) from the fisheries organisations, and any specific data from smaller vessels that are not required to use AIS or VMS is recommended.

In addition, the SFF notes from section 12.7 EXISTING ENVIRONMENT that a description of the commercial fish targeted by vessels registered in UK, Norway, Sweden, Denmark, and Ireland and landed into UK ports (for all vessels) and non-UK ports (for UK vessels only) is provided. This indicates that the landing data for non-UK vessels into non-UK ports is missing (which is a major data gap). To provide a comprehensive picture of fishing activities and their values from the study area, collection and presentation of landing data for non-UK vessels into non-UK ports is imperative. We propose practical ways should be sought to fill in this gap.

Q • Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on commercial fisheries receptors?

SFF Response: No. Following need to be considered in respect with the proposed embedded mitigation:

- We would appreciate the inclusion of 'the Fisheries Management and Mitigation Strategy (FMMS)' to be developed and adopted pre-consent in consultation with fishing industry to ensure all fishing industry's concerns are considered and addressed accordingly.
- As part of the proposed commitments, there is no measure for disruption payments for fishing vessels. SFF suggest that a cooperation agreement should be considered for both the static and mobile gears where they are required to be relocated, or the impact is deemed to be significant.
- In relation to 'Development of and adherence to a VMP and NSP), that will include Notice to Mariners (NtM)'. We suggest that NtM are issued in sufficient time to avoid any disruptions to fishing activities in the intended area.
- Utilise the services of an O.F.L.O with sufficient knowledge of fisheries and fishers that utilise the development area.
- M -23 (Safety Zones) proposes that safety zones (SZ) during the operational phase are also being considered. The Environmental Impact Assessment (EIA) will include an assessment of the proposed approach to Safety Zones at the point of application. The SFF realise the need for use of SZ during construction, major maintenances and decommissioning stages and we propose it should be considered on a rolling basis. However, we object to using/applying SZ during the operational phase of the 'proposed development' as they restrict fishing activities within the array area.

Q • Do you agree with the scoping in and out of impact pathways in relation to commercial fisheries?

SFF Response: SFF notes from Table 13.2 (p319) that 'Physical presence of infrastructure and potential exposure of that infrastructure leading to gear snagging' has been scoped in. We agree with this being scoped in; however, since snagging in some limited cases can result in human casualties, we propose that the possibility of a loss of life should also be highlighted as a risk of snagging hazards not just to fishing gear.

Q • Do you agree with the proposed assessment methodology for commercial fisheries?

SFF Response: No. Following comments need to be addressed:

The SFF is of the view that the definitions of terms relating to the 'magnitude of an impact' and 'sensitivity of the receptor' are vague and the set criteria to define them are unrealistic. For instance, 'Table 12.6 Definition of terms relating to the magnitude of an impact' defines the 'high adverse impact' as:
"Impact is expected to result in one or more of the following:
• *Substantial loss* of target fish or shellfish biological resource (e.g., loss of substantial proportion of resource within project area); and
• Substantial loss of ability to carry on fishing activities (e.g., substantial proportion of effort within project area).
And/or: Impact is of long-term duration (e.g., greater than 12 years) and/or is of extended physical extent".

In the former definition, the terms 'substantial loss' and 'substantial proportion' are vague and there are no measurement criteria to clarify what volume/size they depict/represent. In addition, we are not sure where the definition of long-term duration (e.g., greater than 12 years) come from. We want to know what scientific measures have been used to set a baseline of 12 years for long-term duration?

We have similar concerns in regard to defection of 'medium and low adverse impacts'.

In addition, 'Table 12.7 Definition of terms relating to the sensitivity of the receptor' defines the 'high sensitivity of the receptor' as:
"Receptor is highly vulnerable to impacts that may arise from the project and recoverability is long term or not possible.
And/or: No alternative fishing grounds are available."

Again, the term 'highly vulnerable' has not been defined and it is open to wide interpretation. In addition, a reference to non-availability of alternative fishing ground is not acceptable as the impact assessment should focus on the Development impacts in regard to the existing fishing activities within the 'development array area'.

Therefore, the SFF is of the view that there are no approved guidelines to set realistic criterion to define the magnitude of impact and sensitivity of receptors for commercial fisheries and referring it to 'expert judgement' would be unrealistic and misleading. We propose that guidelines need to be adopted in consultation with the fishing industry representatives to address this issue. In addition, SFF would like to see that the impact of the Development is assessed on individual fishing vessels affected by the Development versus the whole fleet/fishery.

Q • Do you have any other matters or information sources that you wish to be presented in the EIAR?

SFF Response: Yes.
SFF notes from section 12.7.4 Commercial Fisheries Receptors (p303) that pelagic fisheries (sprat and herring) were not listed as 'commercial fisheries receptor' in the study area while 'Figure 12.6' list herring and sprat among the top ten species by weight tonnes from 2018 to 2022 landed from the commercial fisheries Regional Study Area for UK and Manx vessels. In addition, (based on 2018-2022 data from MMO, 2023a), landings of pelagic fish species accounted for 7% of the total landed weight, of local study area (p287). As pelagic fisheries will not be able to resume with the array area post development, we would appreciate the reason why the pelagic fisheries have not been regarded as a commercial fisheries receptor within the study area!?

HRA Screening Report
SFF notes from HRA Screening Report, that some likely significant effects (LSE) as a result of the Proposed Development have been identified and are being taken forward for consideration in the RIAA.

In case any nature compensation measures are proposed in RIAA, we would like to reiterate that we oppose any nature compensation measures to offset the environmental damage from offshore wind developments (that impose any type of restriction) on commercial fisheries. It is unconscionable that the fishing industry should be expected to pay the price for the environmental harms of the offshore wind industry.

The SFF stresses that our primary concern is protecting the rights of fishermen to safely, effectively and efficiently undertake their trade, and this is the cornerstone of our response. Our position is that fishing activities should continue unaffected and unharmed post-development. If impacted fishermen are denied the right to earn their living, SFF will not support the proposal of any windfarm developments, therefore I reiterate that we strongly object to this application.

Best regards

Fahim Mohammad Hashimi
Offshore Energy Policy Manager
Scottish Fishermen's Federation

Argyll District Salmon Fisheries Board

ARGYLL DISTRICT SALMON FISHERY BOARD

Cherry Park, Inveraray, Argyll, PA32 8XE

Abby Gray
Marine Licensing & Consenting Casework Officer
Licensing Operations Team
Marine Directorate
Scottish Government Marine Laboratory
Aberdeen AB11 9DB

21st November 2024

Dear Ms Gray,

Machair Offshore Wind Farm (ScotWind W1 site) Scoping & HRA Consultation

Thank you for your correspondence concerning the Scoping exercise for the proposed Machair Wind Farm.

Argyll District Salmon Fishery Board (ADSFB) have a statutory responsibility to protect and improve salmon and sea trout fisheries and is advised by Argyll Fishery Trusts who provide a research and monitoring role for all freshwater fish in the Board's area. it is important that we can be assured that all potential negative impacts have been assessed in full, and mitigations put in place. We believe that where uncertainty remains, the developer should be required to contribute to research which will help fill these evidence gaps, as a condition of their operational consent.

In common with other parts of the country, wild salmon populations in Argyll and the Isles, are in crisis, and face a range of pressures, some of which are under human control. The Scottish Government have published a wild salmon strategy and implementation plan, which sets out the actions to be taken over a five year period to 2028. The implementation plan includes several actions under the heading of "understanding and mitigating pressures in the marine and coastal environment". We note that the scoping report makes no reference to the Implementation Plan, and only quotes the Strategy itself.

Scottish salmon rivers are categorised by the Scottish Government under The Conservation of Salmon (Scotland) Regulations 2016, according to the likelihood of them meeting their conservation limits. The most recent river gradings have been published for 2024. Nearly all the salmon populations in the rivers of Argyll and the Isles are graded as Category 3, meaning there is a less than 60% probability of meeting their conservation limit. Therefore any additional pressure, including from marine renewables, cannot be considered sustainable.

In recognition that the marine phases of both Atlantic salmon and sea trout are included on the list of Priority Marine Features - the habitats and species of *greatest conservation importance* in inshore waters – we consider that all populations of migratory salmonid fish in Argyll & the Isles should be fully considered in the consenting and assessment process. We note that the scoping report does not recognise that the marine phases of Atlantic salmon and sea trout are Priority Marine Features.

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 each of these evidence gaps is considered in full by the applicant, and developers should *contribute* to filling these evidence gaps as a specific condition of consent.

To properly assess Environmental Statements for developments, information on the use of the development area by diadromous fish should be provided. If such information is lacking then a suitable monitoring strategy should be devised, either for the site in question or through contributing to strategic projects undertaken through ScotMER. Any monitoring strategies must include pre-construction monitoring in order that baseline information on movement, abundance, swimming depth, feeding behaviour etc. can be collected.

Offshore renewable 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 deployed devices on such fish during the deployment, operation and decommissioning phases. 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

Argyll DSFB request that, in addition to the evidence gaps identified by ScotMER, the EIA considers the effects of predator aggregation (e.g. large gadoids/ grey seals) around the proposed development on migrating salmonids at both the smolt and adult stages and, additionally, physical barrier effects on salmon during construction and operation (e.g. noise, shadow flicker). In this regard, it should be noted that NatureScot has formally conceded that shadow flicker from moving turbine blades (and the direct visual effects of moving blades) may adversely affect salmonids in freshwater habitat. Since the same physical principles apply in the marine environment, surface-orientated fish such as salmonids are likely to be exposed to equivalent adverse effects.

Summary

It should be emphasised that we have no wish to prevent or delay any proposed development unnecessarily and we remain keen to work constructively along with our representatives (Fisheries Management Scotland), Marine Scotland and the developers to identify appropriate monitoring programmes which will allow us to be able to assess the acknowledged risks of this development in a more appropriate manner. There is a clear need to undertake 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. In our view, the Developers should fund monitoring, to demonstrate more certainty that the development does not impact on the salmon populations or the fisheries in the Argyll DSFB area. Argyll DSFB would welcome an opportunity to constructively engage with any such process through our representative body.

We hope you find these comments useful.

Yours,

Robert Younger
Clerk to the Argyll District Salmon Fishery Board

Fisheries Management Scotland (FMS)

T: +44 (0)131 221 6567

E: general@fms.scot

Abby Gray
Marine Licensing & Consenting Casework Officer
Licensing Operations Team
Marine Directorate
Scottish Government
Marine Laboratory
Aberdeen
AB11 9DB
22 November 2024

Dear Ms Gray,

Fisheries Management Scotland is the representative body for Scotland's District Salmon Fishery Boards, the River Tweed Commission and charitable Rivers and Fisheries Trusts. Our members work to conserve Scotland's valuable and iconic wild salmon and freshwater fish and fisheries and the aquatic environment on which they depend.

Offshore renewable energy has an important role to play if the Scottish Government are to meet their commitment for Scotland to reach net-zero emissions of all greenhouse gases by 2045. However, there remain a number of outstanding questions and concerns about the potential negative effects on diadromous fish, including Atlantic salmon and sea trout.

District Salmon Fishery Boards have a statutory duty to protect and improve salmon and sea trout fisheries. In assessing marine renewable energy developments (wind, wave or tidal), it is important that DSFBs and Fisheries Trusts, can be assured that all potential negative impacts have been assessed in full, and mitigations put in place. Where uncertainty remains, the developer should be required to contribute to research which will help fill these evidence gaps, as a condition of their operational consent. In addition, and in the light of the nature crisis, we believe that all developers should contribute to projects designed to conserve and restore important habitat at a catchment scale.

Across Scotland, wild salmon populations are in crisis, and face a range of pressures, some of which are under human control. The Scottish Government have published a wild salmon strategy and implementation plan, which sets out the actions to be taken over a five year period to 2028. The implementation plan includes a number of actions under the heading of "understanding and mitigating pressures in the marine and coastal environment". We note that the scoping report makes no reference to the Implementation Plan, and only quotes the Strategy itself.

Where salmon populations are below their conservation limits, any additional pressure, including from marine renewables, cannot be considered sustainable. Scottish salmon rivers are categorised by the Scottish Government under The Conservation of Salmon (Scotland) Regulations 2016, according to the likelihood of them meeting their conservation limits. The most recent river gradings have been published for 2024. There

are now 112 rivers across Scotland graded as Category 3, meaning there is a less than 60% probability of meeting their conservation limit.

It is now well-recognised that populations of Atlantic salmon have rapidly deteriorated across their native range. In the latest species reassessment by the IUCN Red List of Threatened Species, released in December 2023, Atlantic salmon have been reclassified from 'Least Concern' to 'Endangered' in Great Britain (as a result of a 30-50% decline in British populations since 2006 and 50-80% projected between 2010-2025), and from 'Least Concern' to 'Near Threatened' in terms of global populations (as a result of global populations declines of 23% since 2006). Page 162 of the scoping report incorrectly states that GB populations are 'Near Threatened'.

We note, and support, the recent position that the Marine Directorate have taken - "*MSS do not consider it appropriate for an EIA/HRA to conclude there is no or negligible impact just because no evidence exists of the impact. MSS advise that impacts to diadromous fish must be adequately investigated, rather than relying on a lack of evidence to claim there is no impact*".

There are 17 Special Areas of Conservation for which Atlantic salmon are either a primary reason for designation or a qualifying feature. For sea lamprey, there are six SAC sites and for river lamprey, there are six SAC sites. For freshwater pearl mussel, there are 19 SAC sites.

Table 9.7 in the scoping report describes the designated sites relevant to fish and shellfish ecology and the WDA. However, we are slightly confused by the sites identified in this table. Why are the River Moriston SAC and River Oykel SAC identified, but other SACs in the Moray Firth and North coast of the Scottish Mainland are omitted. We are also unclear as to why the Endrick Water SAC is included, but the River Bladnoch SAC is omitted.

Whilst there is often a focus on rivers designated at Special Areas of Conservation (SACs), it is important to recognise that the drivers behind declines in wild salmon and sea trout, and other species of migratory fish, affect **all** rivers to a greater or lesser extent. In recognition that the marine phases of both Atlantic salmon and sea trout are included on the list of Priority Marine Features - the habitats and species of *greatest conservation importance* in inshore waters – we consider that **all** relevant rivers should be fully considered in the consenting and assessment process. We note that the scoping report does not recognise that the marine phases of Atlantic salmon and sea trout are Priority Marine Features.

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 each of these evidence gaps is considered in full by the applicant, and developers should *contribute* to filling these evidence gaps as a **specific condition of consent**.

In order to properly assess Environmental Statements for developments, information on the use of the development area by diadromous fish should be provided. If such information is lacking then a suitable monitoring strategy should be devised, either for the site in question or through contributing to strategic projects undertaken through ScotMER. Any monitoring strategies must include pre-construction monitoring in order that baseline information on movement, abundance, swimming depth, feeding behaviour etc. can be collected.

Offshore renewable 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

deployed devices on such fish during the deployment, operation and decommissioning phases. 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

Fisheries Management Scotland request that, in addition to the evidence gaps identified by ScotMER, the EIA considers the effects of predator aggregation (e.g. large gadoids/ grey seals) around the proposed development on migrating salmonids at both the smolt and adult stages and, additionally, physical barrier effects on salmon during construction and operation (e.g. noise, shadow flicker). In this regard, it should be noted that NatureScot has formally conceded that shadow flicker from moving turbine blades (and also the direct visual effects of moving blades) may adversely affect salmonids in freshwater habitat. Since exactly the same physical principles apply in the marine environment, surface-orientated fish like salmonids are likely to be exposed to equivalent adverse effects.

Conclusion

It should be emphasised that we have no wish to prevent or delay any proposed development unnecessarily and 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.

The scale of proposed offshore developments and other technical approaches to marine renewables development represents a step-change in the exposure of marine animals of high cultural and economic significance to attendant risks. As highlighted above, understanding of many of these risks is insufficient to support proposals for mitigation even at this late stage when substantial developments are being submitted for licensing. The cumulative impact of this proposal alongside those developments already submitted or likely to follow in the near future is potentially even greater. We believe that more needs to be done to ensure that the best scientific talent is made available to find practicable ways to address the unresolved uncertainties. Fisheries Management Scotland would welcome an opportunity to constructively engage with any such process.

Yours faithfully,

Redacted

Alan Wells

CEO, Fisheries Management Scotland

Historic Environment Scotland (HES)

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

By email:
MD.MarineRenewables@gov.scot

Marine Directorate
5 Atlantic Quay
150 Broomielaw
Glasgow,
G2 8LU

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

Enquiry Line: 0131-668-8716
HMConsultations@hes.scot

Our case ID: 300071933
Your ref: SCOP-0057
27 November 2024

Dear Marine Directorate

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Machair Wind Offshore Development - ScotWind W1 Site, located off the west coast of Scotland, northwest of Islay and west of Colonsay
Comments on scope of proposed Environmental Impact Assessment

Thank you for consulting us on this Environmental Impact Assessment (EIA) scoping report, which we received on 17 October 2024. We have reviewed the details in terms of our historic environment interests. This covers World Heritage Sites, scheduled monuments and their settings, category A-listed buildings and their settings, inventory gardens and designed landscapes, inventory battlefields and Historic Marine Protected Areas. We have also provided advice relating to known, undesignated underwater historic environment assets.

The relevant local authority archaeological and cultural heritage advisors will also be able to offer advice on the scope of the cultural heritage assessment. This may include topics covered by our advice-giving role, and also other topics such as unscheduled archaeology, category B and C listed buildings, and conservation areas.

Proposed development

We understand that the proposed development comprises up to 147 fixed turbines of up to 340m in height, northwest of Islay and west of Colonsay and associated infrastructure, including inter-array cables, scour protection for foundations, and external cable protection.

Scope of assessment

We recommend that the applicant refers to the EIA Handbook for best practice advice on assessing cultural heritage impacts. We have included more detailed comments on the scope of assessment and the required methodology in the annex to this letter.

We have identified likely significant effects on our historic environment interests, particularly Dubh Artach Lighthouse (LB12320). Our advice on the nature of these impacts, and any potential mitigation measures, are included in an annex to this covering letter. This also includes our requirements for information to be included in the EIA Report.

We would be pleased to have discussions with the developers as the design of the proposed development is refined and preliminary environmental impact assessments become available.

Further information

Decisions that affect the historic environment should take the Historic Environment Policy for Scotland (HEPS) into account as a material consideration. HEPS is supported by our Managing Change guidance series. In this case we recommend that you consider the advice in the Setting guidance note.

We hope this is helpful. If you would like to submit more information about this or any other proposed development to us for comment, please send it to our consultations mailbox, hmconsultations@hes.scot. If you have questions about this response, please contact Mary MacLeod Rivett at mary.macleod@hes.scot .

Yours sincerely

Historic Environment Scotland

ANNEX

EIA methodology

A 50km study area is proposed for onshore heritage assets. We are largely content with this. The impacts of this proposed development on the setting of historic environment assets should be assessed using detailed ZTV and appropriate visualisations (including photomontages) taking in key views associated with the setting of each asset. When an asset that falls within the ZTV has been scoped out of further assessment, written justification should be provided in the EIA Report. We would be happy to provide further advice as assessment proceeds and draft visualisations become available.

Listed Buildings

Dubh Artach Lighthouse (LB12320)

The boundary of the proposed development area is located approximately 2km from the lighthouse. It encloses the lighthouse to the south, east and west. The boundary of the development area is approximately 15km northwest of Islay, 12.5km west of Colonsay, 27km west of Jura, 20km southwest of Mull. As part of the scoping workshop (May 2024), 27 viewpoints were proposed, including from these island/areas, which is welcomed.

The Asset
Dubh Artach Lighthouse, also known as Dhu Heartach, (LB12320) was built between 1869 and 1872. It was designed by engineers David and Thomas Stevenson. The area between the Rhinns of Islay lighthouse (1825) and Skerryvore lighthouse (1844), which is 11 miles southwest of Tiree, led to many wrecks on the Torrin Rocks, which lie between Mull and Colonsay.

The lighthouse was built in response to this and to the increase in vessels being wrecked or driven ashore in the area bounded by Tiree, Iona, Colonsay and Islay, particularly in the winter of 1865/66. It acted as a navigation aid to help vessels avoid the rock/Dubh Artach itself, the Torran Rocks and to find shelter among the surrounding islands when required. The lighthouse was automated in 1971.

Cultural significance of the lighthouse
The cultural significance of the lighthouse primarily relates to its historic and functional role as a navigational aid, its form and design by the Stevenson brothers, and its remoteness. Views to and from the lighthouse are important to our understanding, appreciation and experience of this cultural significance.

Important views from the asset include those to the surrounding seascape because they contribute to an understanding of its remoteness, and important views to the asset include those from shipping routes and islands (where visibility exists) because they contribute to an understanding of its function.

The proposed turbines would be readily visible and relatively close in views from the lighthouse (towards the south, southeast and southwest) and in views to the lighthouse (from all directions). This change has the potential to significantly change how the setting of the lighthouse contributes to an understanding, appreciation and experience of its cultural significance.

Our advice
There is potential for significant impacts to the setting of the lighthouse, and we require further information before we are able to accurately assess the level of these potential impacts. In order to do this, further information is required as follows:

- An assessment of the setting of Dubh Artach/Dhu Heartach Lighthouse and how it contributes to the cultural significance of the lighthouse.
- An assessment of how the proposed turbines would affect the contribution that important views make to an understanding, appreciation and experience of the lighthouse's cultural significance.
- Wireline visualisations that illustrate potential impacts of the development on views to and from the lighthouse. After reviewing these visualisations, we may advise that photomontages are also required.

If potential impacts are confirmed as significant then it may be possible to reduce them by careful design, or redesign, of the proposed turbine layout. However, this may require substantive changes and we recommend that assessment is undertaken early in the design process.

Underwater marine historic environment assets

There are 7 recorded marine archaeological features within the development boundary. These include the wreck Eli, which was a cargo ship built in 1931 and sunk by a German aircraft in 1940; possible wreckage amongst rocks; an unknown wreck near Dubh Artach lighthouse from 1836; and the unverified location of a 20th-century barque carrying coal. The assessment should identify and confirm their location at an early stage to inform the design of the development. Direct impacts should be avoided, including where wreckage is dispersed.

In due course, the applicant should thoroughly assess potential impacts on marine archaeology. This should incorporate the outcomes of geophysical and other survey of the seabed and include analysis of potential impacts on paleoenvironmental deposits and unexpected/previously unknown archaeological features and artefacts.

Thereafter, we would expect that an outline Written Scheme of Investigation (WSI) and Protocol for Archaeological Discovery (PAD) be prepared and submitted as part of the application. Such documentation should be updated post-consent and should include embedded mitigation including the implementation of Archaeological Exclusion Zones and Temporary Archaeological Exclusion Zones.

Scheduled Monuments

On the basis of the information provided to date, it is likely that the proposed windfarm would impact the setting of a number of scheduled monuments. In particular, those that are early Christian and that often depend on a sense of place and isolation derived from being set on the edges of landforms and a relationship with the wide open sea. At this early stage, it is not possible to establish whether the severity of these impacts would likely raise issues of national importance such that we might object. The EIA Report should fully assess these, including wireframes and/or photomontages, where appropriate.

There are a large number (178) of scheduled monuments located within 50km of the development boundary, spread across Tiree, Coll, Iona, Mull, the Garvellachs, Colonsay, and Islay. These are depicted in Figure 14.4 of the scoping report.

The impacts of this proposed development on the setting of these assets should be assessed through the use of a detailed ZTV as well as appropriate visualisations (preferably photomontages) taking in key views associated with the setting of each monument. A forthcoming EIAR should provide written justification for the scoping out of any monuments that fall within the ZTV.

Particular attention should be given to monuments that have a known visual relationship with the sea that contributes substantively to their cultural significance and where changes as a result of the proposed development might result in significant effects.

Without prejudging future assessment, it is likely to be those sites that contain components of monastic or early Christian occupation that have the greatest potential for a significant adverse impact on their settings. Some cluster around fertile land and sheltered bays and are often associated with earlier high-status farmsteads such as mediaeval sites where Christianity was promoted by the elite, for example **Nave Island, monastic site, Viking house, chapel, burial ground, settlement and kelp-burning kiln (SM3233)**. Others are in more isolated locations and occasionally inserted into the remains of brochs and other Iron Age sites. The most evocative, often those ascribed with the most spiritual associations by modern communities, exploit an isolated location, deliberately chosen to enhance the sense of occupying a monastic ‘retreat’, a place physically and visually cut off from the rest of the world. Their sense of place derives from being ‘on-the-edge’, exposure to the sea and a level of perceived wildness. A large number of turbines present within outward views of the sea from these sites is likely to represent a significant alteration to their settings.

Sites include, but are not limited to:

- **Beinn a' Chaisteil, promontory fort and associated remains, Islay (SM13213)**
- **Nave Island, monastic site, Viking house, chapel, burial ground, settlement and kelp-burning kiln (SM3233)**
- **Oronsay Priory and Cross (SM287)**
- **Eileach-an-Naoimh, monastery, Garvellachs (SM90138)**

- **St Mary's Abbey, Iona, monastic settlement (SM12968)**
- **St Patrick's Chapel, Ceann a' Mhara, Tiree (SM6905)**

Beinn a' Chaisteil, promontory fort and associated remains, Islay (SM13213) comprises the remains of a substantial promontory fort and enclosed coastal settlement, occupying a distinctive coastal headland on the north-west coast of Islay. The visible remains reflect at least two and probably more phases of use, the earliest of which is likely to be later prehistoric in origin (between 500 BC and AD 500). The site is split into two distinctive areas; an upper promontory and a lower promontory, with the latter being difficult to access and very secluded, and it is possible that this lower promontory may contain the remains of an early monastic settlement. Its setting, particularly that of the lower settlement, is one of almost complete isolation and separation from the land; it is a site that draws on exposure to the sea, and an ethereal sense of place deriving from being literally 'on the edge'. Views out to sea containing nothing but the wide, open ocean contribute greatly to its cultural significance.

Nave Island, monastic site, Viking house, chapel, burial ground, settlement and kelp-burning kiln (SM3233) Located on a small sandy bay, the earliest known use of the site was as a monastic site prior to the Norse settlement, with a later church then following. Although Nave Island is remote from modern day focus of settlement, for much of its history it would have occupied a far more prominent position on the major western sea routes of the Atlantic coast of Scotland and the British Isles. This extensive network of trading and transport links played a significant role in much of Scotland's history, including the spread of Christianity, the later spread of Scandinavian overlordship and the dominance of the Gaelic Lordship of the Isles, all of which are reflected in the remains found on Nave Island. Its setting therefore draws on these maritime relationships; this includes the positioning of the site in the small sandy protected bay with its marginally more fertile ground, as well as views from the island out to sea.

Oronsay Priory and Cross (SM287) The visible ruins comprise an Augustinian priory on the small island of Oronsay off Colonsay, founded sometime between 1325 and 1353, but believed to be on a site with links dating back to St Columba. Later works include a church, cloister, conventual buildings, prior's house and burial aisles, extending into the early 1500s, with some further burial enclosures added later still. Its setting includes its deliberate positioning amidst relatively fertile ground on an island with wide open views to the Atlantic beyond and on the routeways between Ireland and Iona.

Eileach-an-Naoimh, monastery, Garvellachs (SM90138) The extensive remains of a monastery originating in the pre-Norse period, arguably the best preserved Early-Christian monastery in Scotland. In common with other early monastic sites, its setting includes the deliberate isolation, away from centres of population and drawing on its exposure to the sea. It possesses an ethereal sense of place deriving from being literally on the edge.

St Mary's Abbey, Iona, monastic settlement (SM12968) comprises the remains of the large early historic monastic settlement founded by St Columba in AD 563, now occupied by restored medieval buildings associated with the Benedictine Abbey of St Mary

founded around AD 1200. It is the birthplace of Scottish Christianity and internationally renowned for its surroundings and spiritual associations. It was easily reached by Columba and his followers from Ireland by sea and sits at the crux in linking Ireland with western Scotland. Although exploiting a sense of remoteness, its coastal location resembles that of many other monastic sites at a time when the sea would have been the main communication route allowing movement around a network of monastic communities. Its setting includes characteristics of that isolation, its relationship to the sea and the links across to Ireland but also extends to encompass the rest of the island and the complex of other sites across it which are associated with St Columba and the monastery's later history. Key outward views from the monastery include those looking towards Ireland, reciprocal views along the Street of the Dead, views and other associated links between the abbey, nunnery, Martyr's Bay and many other related chapels, crosses and other sites across the island. The links between this inter-related group of sites combine to create Iona's setting, and all include a relationship along the coast and out across the sea. It is possible that the proposed turbines may be visible within these views and could diminish Iona's sense of isolation and its relationship with the sea.

St Patrick's Chapel, Ceann a' Mhara, Tiree (SM6905) It is likely to have originated as an early Christian monastic site, possibly a retreat from another early monastic site at Balemartine. The sense of a retreat derives from its small size and its isolation. Its positioning on the side of a bay looking out to sea adds considerably to that sense of place. Although the proposed turbines would be likely to be a significant distance from Tiree, the potential for adverse impact nevertheless exists.

Historic Environment Scotland
27 November 2024

Marine Analytical Unit (MAU)

MachairWind Offshore Wind Farm

Marine Analytical Unit ("MAU") Response
Marine Directorate

The MachairWind Offshore Wind Farm Development scoping report includes descriptions of a range of potential impacts. This response focuses only on the assessment of social and economic impacts.

We recommend that a full Socio-Economic Impact Assessment be carried out. We provide general advice on how to deliver this in Annex 1.

1. Overview

1.1. Study areas

We noted that South Ayrshire has been identified as a local study area for tourism. We noted that the economic effects will be assessed at the level of the Scottish and UK economies.

It's understood that a final decision has not been made regarding the port location but a shortlist of potential ports have been identified in the MachairWind Development Economic and Social Scenarios: Opportunities and Impacts report. We are pleased to see this included, particularly that a wide range of socioeconomic impacts have been assessed, including housing, communities, labour market, infrastructure and habitability which were identified as important issues through the consultation with potential host communities.

We note that areas of impact appear to be based around "*the locations of the construction phase and O&M phase ports, the location of any large manufacturing facilities, and locations on land, with visibility of the WDA infrastructure*.". We would recommend expanding the areas of impact to consider "communities of practice", alongside the "communities of place" approach listed in the scoping report once the final locations of the project have been determined. This would allowed the project to consider a broader range of effected parties that may be impacted by the development.

1.2. Consultation, stakeholder engagement, and primary data collection

We noted a stakeholder mapping exercise was conducted to identify relevant individuals, and a consultation on socio-economics, related to the potential impact of construction and O&M activities, has been undertaken prior to preparation of this Scoping Report as part of the Project's Economic and Social Scenarios: Opportunities and Impacts report (BiGGAR Economics, 2024). We were pleased to see that a stakeholder mapping exercise was conducted, and that the consultation

conducted to date included statutory and non-statutory consultees, particularly community groups, as well as third sector organisations. In addition it was positive to see that the results of these consultations helped shape the focus of the socio-economic impacts under assessment, particularly the concern around housing in island communities.

We would encourage the developer to include the results of the qualitative research that was included within Appendix K during the application stage. It would be useful to see a detailed breakdown of how the work was conducted, the overall results and how it informed the assessment, in addition to the quantitative data provided.

Academic research (e.g. Aitken et al 2016; Devine-Wright 2011; Firestone et al 2012; Howell 2018; Jijelava and Vanclay 2028; Langbroek and Vanclay 2012; Vanclay 2020) shows that it is important to involve local communities in social impact assessments and address any concerns communities might have. This decreases the delivery risks for projects. Following this research, we believe that the engagement of stakeholders (including local communities) is very important for the assessment of socio-economic impacts, as these communities might be directly impacted by the development.

1.3. Data sources

Please use the most up-to-date data sources.

2. Scoping of impacts

2.1. Social impacts

We disagree with scoping out of cumulative impacts during the decommissioning phase (mentioned in Table 18.5, page 460). It is important to consider how decommissioning might create a range of impacts

2.2. Economic impacts

We agree with the proposed approach for assessing economic impacts, in particular that the assessment will include direct, indirect and induced impacts for all phases of the project. This method has been used within the MachairWind Development Economic and Social Scenarios: Opportunities and Impacts report when analysing potential port locations. The economic impact assessment of the potential port locations provided useful context.

We agree that the assessment should take into account deadweight, leakage, displacement and substitution, and that sensitivity analysis is performed to account for risk, uncertainty and optimism bias. Please refer to our guidance shown in Annex 1 for further information. The scoping report outlines that employment impacts will be assessed at each phase of the project in terms of years of employment and jobs. If it is possible to supply additional information about the types of jobs that are expected to be created (e.g. part-time, full-time, skilled, unskilled etc) and how these compare to the existing jobs in the study area, this will add further depth to the analysis.

We expect to see a detailed description of the methodology used to assess economic impacts in the assessment, including specific details about the methodological approach taken and any key assumptions that underpin any estimates. This may be supplied in a technical annex if necessary.

3. Conclusions

We broadly agree with the proposed approach for assessing economic and social impacts and we welcome the analysis regarding potential port locations. We were pleased to see the inclusion of stakeholder mapping and that the consultation exercise included statutory as well as non-statutory consultees. We would encourage the developer to expand the areas of impact investigated to include potential “communities of practice” once locations are better determined in order to better capture potential impacts of the development on effected communities.

References

Aitken, M., Haggett, C. and Rudolph, D. (2016) Practices and rationales of community engagement with wind farms: awareness raising, consultation, empowerment. Planning Theory & Practice, 17(4): 557-576. https://doi.org/10.1080/14649357.2016.1218919

Devine-Wright, P. (2011) Enhancing local distinctiveness fosters public acceptance of tidal energy: A UK case study. Energy Policy, 39(1): 83-93. https://doi.org/10.1016/j.enpol.2010.09.012

Firestone, J., Kempton, W., Blaydes Lilley, M. and Samoteskul, K. (2012) Public acceptance of offshore wind power: does perceived fairness of process matter?, Journal of Environmental Planning and Management, 55(10): 1387-1402. https://doi.org/10.1080/09640568.2012.688658

Howell, R. (2018) PhD Thesis “In sight and in mind: Social implications of marine renewable energy”. University of Edinburgh. Available at In sight and in mind: social implications of marine renewable energy (ed.ac.uk) (accessed 10/03/2023).

Jijelava, D. and Vanclay, F. (2018) How a large project was halted by the lack of a social Licence to operate: Testing the applicability of the Thomson and Boutilier model, in Environmental Impact Assessment Review 73: 31-40. https://doi.org/10.1016/j.eiar.2018.07.001

Langbroek, M. and Vanclay, F. (2012) Learning from the social impacts associated with initiating a windfarm near the former island of Urk, The Netherlands, Impact Assessment and Project Appraisal 30(3): 167-178. https://doi.org/10.1080/14615517.2012.706943

Vanclay, F. (2020) Reflections on Social Impact Assessment in the 21st century, Impact Assessment and Project Appraisal 38(2): 126-131. https://doi.org/10.1080/14615517.2019.1685807

Annex 1: General Advice for Socio-Economic Impact Assessment
Marine Analytical Unit (MAU)
Marine Directorate
October 2024

This document sets out some suggestions for delivering socio-economic impact assessment drawing on the professional expertise of the Marine Analytical Unit (MAU), Marine Directorate.

Section 1. Some general best practice tips

- Take a proportionate approach to SEIA in line with the size of the development
- Consider offshore and onshore components of the development in the same assessment.
- Employ experts to design and carry out the assessment. The relevant expertise would include:
    - Social research and economist training, qualifications and experience
    - Familiarity and experience with appropriate methods for each discipline (including economic appraisal, social research methods such as surveys, sampling, interviews, focus groups and participatory methods)
- Consider potential secondary socio-economic impacts of any changes that affect the other relevant receptor groups covered in the wider EIA e.g. commercial fisheries, cultural heritage and archaeology and visual impacts.
- Include consideration of the cumulative impact of multiple offshore developments.
- Outline the rationale for scoping out impacts that are deemed to be minimal, including any evidence or analysis that has been used. If this is not provided it can be difficult for MAU to understand why impacts have been scoped out and we may suggest scoping them back in.

Section 2. Key components of a Socio-economic Impact Assessment

We set out below what we consider to be the key steps to an assessment. We recommend a combined approach so that social and economic impacts are covered together in the assessment, whilst acknowledging that different methodologies for social and economic impacts assessment are needed at certain stages, and that the two disciplines are distinct.

We wish to highlight the importance of stakeholder engagement throughout the assessment, and the use of social research methods (see Methods Toolkit referenced at the end of this Annex) to gather primary data and first hand perspectives from particular groups and communities that are affected. These are helpful in order to better understand the nature and degree of impacts that might be caused by changes that are expected occur. A change in itself may or may not bring about tangible impact, impacts may vary for different people or be perceived in different ways, are affected by individual values and attitudes, and conditioned by the context.

Stakeholder engagement and data collection can occur at a number of stages in the SEIA process and may involve similar methodologies but there are important differences to note. The primary aims of stakeholder engagement are to inform, consult or involve key stakeholders, and to communicate information and gather feedback. Data collection, in contrast is a more rigorous analytical process involving:

- Setting out a planned methodology in advance with clear objectives of what you wish to achieve through data collection
- Sampling strategies that take account of the demographic variations in the population and the need to include difficult to reach groups
- Robust methods to collect information from people in a neutral and unbiased way
- Awareness of how data will be analysed and reported on to obtain and disseminate robust conclusions
- Taking account of research ethics including informed consent, and data protection requirements under GDPR

The stages below are divided into the activities that we suggest are **before** the developer submits a request for a scoping opinion and those that are done **after** the scoping phase. We recommend an iterative approach which means that steps inform each other, information is built up over time, and some steps may be repeated or done in a different order.

The key steps should include:

Pre-scoping activities

1) **Getting started:** Employ economist and social research experts and work with them to develop a plan for the SEIA that sets out data requirements, and the proposed social and economic data collection and impact assessment methodologies, timescales, any data protection considerations, risk assessment and ethical issues that might arise from the work.

2) Develop a **detailed description** of the planned development and consider the project phases where socio-economic impacts might be experienced (covering development, construction, operation and maintenance and decommissioning phases). Start to map out potential socio-economic impacts and initial consideration of areas of impact on land that will need to be covered.

3) **Initial scoping of impacts:** develop a broad list of potential impacts informed by experts (including social researcher, economist, local representatives from key groups, community stakeholders and others).

4) **Define potential impact areas on land** taking into account locations and connections between activities. Different types of impacts may be experienced at different geographic levels, some in the area nearest the landfall or the nearest coastline to the development at sea, and others much further away (at Scotland level, UK level and internationally). The geographical scale at which social impacts are experienced may be different for social impacts compared with economic impacts. There may be multiple epicentres from which impacts radiate

including the site of the development, land-based areas such as landfall and grid connections, construction bases and places from which the development is visible. Activities that take place in the sea are also relevant for defining the impact area on land, for example the location of fishing activity and ports where fish are landed. The definition of the impact area will inform which communities and which sectors are included in the assessment and vice versa, so this exercise needs to be done iteratively with step 3, the initial scoping of impacts.

5) **Stakeholder mapping** is required to identify all the people, groups and stakeholders who may be affected by the development and is a first step in order to conduct effective stakeholder engagement. This exercise is informed by the definition of the impact area. A broad approach is recommended. Stakeholders are likely to include local communities, businesses, workers, other users of the sea, interest groups, community councils and so on.

   Steps 4 and 5 may lead to a change in the list of potential impacts so this will need refined/checked.

6) **Stakeholder engagement (with those affected by the development, sea users, communities etc)** is a key requirement of SEIA that is done at different stages of the process. We recommend doing some initial stakeholder engagement before submitting the scoping report. Stakeholder engagement will fulfil a number of requirements:

   - **Provide information about the development** so that those who might be affected are able to make an informed judgement about potential impacts

   - **Present and refine list of potential impacts based on feedback** - identify impacts that are most relevant and add any additional ones that are identified

   - **Collect initial data/ insights from stakeholders** on what potential socio-economic impacts (to be developed later)

   - **Build relationships** with the community and key groups affected for later stages of the SEIA process so that they can understand the decisions making process and how they can influence it.

   There are many **participatory methodologies** that can be used for effective stakeholder engagement that provide a deliberative space for community discussions.

   This stage may also require the setting up of governance structures and a community liaison officer. **Early engagement** with those who might be affected is very important, as is meaningful and inclusive engagement where people feel that they are being listened to and that their feedback will be acted upon. It is important to set out clearly how stakeholder engagement is being done for the SEIA specifically.

7) **Gather contextual information** to develop a social and economic profile of the area prior to the development that will help with setting the baseline and impact

prediction, identifying potential industries and communities that might be affected and sources of data that can be used in the assessment. This might include primary data collection using social research methods (such as surveys, interviews, focus groups) as well as desk based analysis (of existing data sets such as fishing data, population data).

Primary data collection may occur alongside participatory activities (e.g. engagement events) but must be done in a rigorous and systematic fashion and the findings should be robustly analysed and incorporated into the SEIA. Impacts that are identified for the other receptors in the wider EIA may also have socio-economic consequences and so it may be important to include these in the SEIA.

8) **Produce list of anticipated impacts to be covered in the scoping report** setting out the range of potential impacts that could occur, building on what has already been done using data and insights that have been collected from various activities described above. Details of the methods that have been used should be included to enable Marine Directorate to determine if the analysis is based on a robust and appropriate approach. Justification should be provided for any impacts that are scoped in or out. This could be based on suggestions made by stakeholders and the public during stakeholder engagement or an assessment based on the analysis of primary and secondary data.

   It is helpful if the scoping report includes details on the approach to be used for the SEIA including methods for data collection, planned stakeholder engagement activities and data-sets to be used.

Post scoping activities for the SEIA

The scoping opinion will advise on the final list of socio-economic impacts to be assessed in the SEIA. This may require additional data collection/ social research to enable a more rigorous assessment of a narrower set of anticipated impacts. It may also require further stakeholder engagement in order to check the significance of impacts with different groups, and the acceptability of mitigation options.

The data and information that has been collected throughout the scoping phase will be used to conduct steps 9, 10 and 11 below.

9) **Conduct baseline analysis** to assess the situation in the absence of the development, to provide a point of comparison against which to predict and monitor change. Appropriate social and economic measures should be used for the baseline and cover relevant issues (see section 4 for suggested data sources). Key stakeholders and other interested parties including affected communities and sectors may be aware of baseline data to be included, and this can be explored in the participatory approaches described above. The findings from social research can also be included in the baseline. Note that baseline data can be presented in the scoping report but is also the first stage of the SEIA and so should be included in the SEIA report.

10) Predict impacts and assess their significance (otherwise known as impact appraisal or options appraisal)

Through analysis, estimate the social and economic changes and their expected impacts, considering any alternative development options and how significant the impacts might be. This is the core part of the assessment and forms the main part of the assessment report. Different methodologies and both primary and secondary data inform this part of the exercise.

Different phases of the development should be covered (development, construction, operation and maintenance) and also transitions between phases (if relevant).

The knock on socio-economic consequences of impacts in other parts of the EIA assessment should be assessed here, such as the impact on commercial fisheries, and impacts on related industries such as tourism could also be included.

It is important to consider distribution of impacts among different social groups (covering protected quality characteristics, socio-economic groups and geographic area where relevant to do so).

Economic impact appraisal should include consideration of:

- Direct, indirect and induced impacts;
- Leakage, displacement and substitution effects;
- Deadweight loss;
- Cumulative impacts;
- Sensitivity analysis to account for risk, uncertainty and optimism bias.

There are a range of methodologies for calculating direct, indirect and induced impacts. These include the appropriate use of multipliers, a local content methodology, stakeholder involvement and expert opinion.

Modelling approaches should be realistic, based on robust data, and avoid over promising the economic impacts.

All prices should be presented in real terms (excluding inflation) and should state which year the prices represent.

11) Development enhancement, mitigation strategy and complete SEIA report.

There may be an opportunity for adaptation or other approaches to mitigate potentially adverse impacts and to maximise positive opportunities. This may include engagement with the community to develop a strategy for enhancing benefits and mitigating against impacts; or development of a Community Benefit Agreement (CBA). Again these activities should be done collaboratively with stakeholders where relevant and appropriate.

The SEIA report should clearly set out the methods used in the assessment, justification for decision made such as scoping certain impacts in or out of the

assessment, and the approach to analysis. The report should cover the baseline analysis and results of the impact prediction or appraisal, and distributional impacts . Social and economic impacts can be set out separately (where this makes sense) and together where they overlap.

It is good practice for the report to be reviewed by the people (i.e. the wider group of stakeholders and communities) who were involved in providing data for its production.

Section 3. Examples of different types of socio-economic impacts

In the literature social and economic impacts are defined in many different ways. Sometimes social and economic impacts are covered separately, whilst other sources refer to socio-economic impacts.

The following table sets out some commonly identified socio-economic impacts.

Examples of Socio-economic Impacts from Glasson 2017[1]

1. Direct economic:

- GVA
- employment, including employment generation and safeguarding of existing employment;
- characteristics of employment (e.g. skill group);
- labour supply and training; and
- other labour market effects, including wage levels and commuting patterns.

2. Indirect/induced/wider economic/expenditure:

- employees' retail expenditure (induced);
- linked supply chain to main development (indirect);
- labour market pressures;
- wider multiplier effects;
- effects on existing commercial activities (e.g. tourism; fisheries);
- effects on development potential of area; and

3. Demographic:

- changes in population size; temporary and permanent;
- changes in other population characteristics (e.g. family size, income levels, socio-economic groups); and
- settlement patterns

4. Housing:

- various housing tenure types;

[1] Glasson J (2017a) "Socio-economic impacts 2: Overview and economic impacts" in Therivel R and Wood G (eds.), Methods of Environmental and Social Impact Assessment, Abingdon: Routledge

- public and private;
- house prices and rent / accommodation costs;
- homelessness and other housing problems; and
- personal and property rights, displacement and resettlement

5. Other local services:

- public and private sector;
- educational services;
- health services; social support;
- others (e.g. police, fire, recreation, transport); and
- local authority finances

6. Socio-cultural:

- lifestyles/quality of life;
- gender issues; family structure;
- social problems (e.g. crime, ill-health, deprivation);
- human rights;
- community stress and conflict; integration, cohesion and alienation; and
- community character or image

7. Distributional effects:

Distributional analysis is a term used to describe the assessment of the impact of interventions on different groups in society. Interventions may have different effects on individuals according to their characteristics such as income level or geographical location, effects on specific groups in society (eg: by virtue of gender, age, religion, language, ethnicity and location); environmental justice.

Section 4: Useful Data Sources for Socio-Economic Impact Assessments

Name	Summary	Link to Source
Statistics.gov.scot	Contains a wide range of data by local authority and other geographic breakdowns. Has a search by subject and area option.	statistics.gov.scot
Marine Economic Statistics	Annual economic statistics publication including GVA and employment data for marine economy sectors.	Marine economic statistics - gov.scot (www.gov.scot)

Scottish Sea Fisheries Statistics	Provides data on the tonnage and value of all landings of sea fish and shellfish by Scottish vessels, all landings into Scotland, the rest of the UK and abroad, and the size and structure of the Scottish fishing fleet and employment on Scottish vessels.	Sea fisheries statistics - gov.scot (www.gov.scot)
Scottish Shellfish Farm Production Survey 2022	Statistics on employment, production and value of shellfish from Scottish shellfish farms.	Scottish Shellfish Farm Production Survey 2022 - gov.scot (www.gov.scot)
Scottish Annual Business Statistics 2020	Scottish Annual Business Statistics (SABS) presents estimates of employment, turnover, purchases, Gross Value Added and labour costs. Data are provided for businesses that operate in Scotland. Data are classified according to the industry sector, location and ownership of the business.	Scottish Annual Business Statistics 2020 - gov.scot (www.gov.scot)
Sub-Scotland Economic Statistics Database	The Sub-Scotland Economic Statistics Database provides economic, business, labour market and population data for Scotland, and areas within Scotland.	Sub-Scotland Economic Statistics Database - gov.scot (www.gov.scot)
Nomis Official Labour Market Statistics	Labour market statistics including data on employment, unemployment, qualifications, earnings etc.	Nomis - Official Labour Market Statistics (nomisweb.co.uk)
Economics of the UK Fishing Fleet 2020	Economic estimates at UK, home nation and fleet segment level for the UK fishing fleet. The estimates are calculated based on samples of fishing costs and earnings gathered by Seafish as part of the 2020 Annual Fleet Economic Survey.	Economics of the UK Fishing Fleet 2020 — Seafish
Scotland’s Census, National Records of Scotland	Census data that provides information about the characteristics of people and households in the country.	Scotland's Census | National Records of Scotland (nrscotland.gov.uk)

Scottish Index of Multiple Deprivation	Collection of documents relating to the Scottish Index of Multiple Deprivation - a tool for identifying areas with relatively high levels of deprivation.	Scottish Index of Multiple Deprivation 2020 - gov.scot (www.gov.scot)
National Records of Scotland mid-year population data	Population estimates on an annual basis for Scotland and its constituent NHS Board and council areas.	Mid-Year Population Estimates | National Records of Scotland (nrscotland.gov.uk)
The Green Book	HM Treasury guidance on how to appraise and evaluation policies, projects and programmes.	The Green Book: appraisal and evaluation in central government - GOV.UK (www.gov.uk)
The Magenta Book	HM Treasury guidance on evaluation. Chapter 4 provides specific guidance on data collection, data access and data linking.	The Magenta Book - GOV.UK (www.gov.uk)
Enabling a Natural Capital Approach (ENCA)	Supplementary guidance to The Green Book. ENCA resources include data, guidance and tools to help understand natural capital and know how to take it into account.	Enabling a Natural Capital Approach (ENCA) - GOV.UK (www.gov.uk)

Section 5: Further sources of guidance:

HM Treasury guidance on how to appraise and evaluate policies, projects and programmes: The Green Book: appraisal and evaluation in central government

Best practice in Social Impact Assessment according to the International Association for Impact Assessment: Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects

The project A two way Conversation with the People of Scotland on the Social Impacts of Offshore Renewables (CORR/5536) has developed elements of a conceptual framework on social values that can be used to support and inform existing processes for assessing the potential social impacts of offshore renewables plans: Offshore renewables - social impact: two way conversation with the people of Scotland

Best practice guidance for assessing the socio-economic impacts of OWF developments: Guidance on assessing the socio-economic impacts of offshore wind farms (OWFs)

A toolkit of methods available to assist developers, consultants, and researchers carrying out socio-economic impact assessments: Methods Toolkit for Participatory Engagement and Social Research - gov.scot (www.gov.scot)

Marine Directorate - Science, Evidence, Data and Digital (MD-SEDD)

E: MD-SEDD-RE_Advice@gov.scot

Abby Grey
Marine Directorate Licensing Operations Team
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

22 NOVEMBER 2024

MACHAIRWIND OFFSHORE WINDFARM - SCOTWIND W1 SITE - SCOPING AND HRA CONSULTATION

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

Commercial Fisheries

MD-SEDD note the presence of a >15m potting fleet active across the array area, and advise that the layout and spacing of turbines within the array area is designed to facilitate coexistence with this fleet where possible. Consultation with the fishing industry is advised to determine if smaller or larger turbine spacing is preferable.

On page 281 in Table 12.2 it says “The Applicant confirmed that the sprat fishery would be added to the list of receptors in the commercial fisheries assessment.”, however the sprat fishery is not listed as a key receptor in section 12.7.4. MD-SEDD advise that the sprat fishery is assessed in the commercial fisheries assessment.

MD-SEDD note that the impact of additional steaming times has been scoped out of the assessment and that the SWPFA, SPFA and SFF have all agreed that this can be scoped out. MD-SEDD agree this can be scoped out.

MD-SEDD advise that the Scotmap data should not be relied upon to provide information on

the commercial fisheries baseline for the inshore fleet as it is out of date. MD-SEDD advise that this dataset should be used only to validate information gathered through consultation with local fishers and stakeholders. MD-SEDD note that the <12m fleet account for a large proportion of landings within the local study area and therefore advise the importance of consultation to help identify the fishing grounds for these vessels.

In section 12.7.3 the applicant states that "Mapping for vessels 12 m and under is available for all Scottish vessels, without distinguishing gear type." MD-SEDD advise that the Scottish Government gridded fisheries data for Under 12 metre vessels (2018-2022) is split by gear type, and is a more up to date source of fishing activity for <12m fleet than the Scotmap data. The gridded data is available as heat map layers on Marine Scotland Maps and can also be downloaded via Spatialdata.gov.scot. The layers can be quickly accessed from the links at the bottom of this page: Fishing - Activity data and statistics | Marine Scotland Information.

MD-SEDD advise that applicants include AIS data provided by EMODNet which gives the amount of time spent by fishing vessels in a location. These can be found via emodnet.ec.europa.eu under "vessel density", and provide a useful way to visualise fishing activity spatially. These provide a better indication of fishing intensity than the AIS route density data presented in the scoping report, as they weight the movement of a vessel through a grid quare with how long the vessel has stayed in that square and how much of the square it has covered.

Physical Processes

The MD-SEDD oceanography advisor has reviewed Chapter 6 (Marine Physical Environment) of the Machair Wind Offshore Wind Farm (OWF) offshore Environmental Impact Assessment (EIA) scoping report, mainly focusing on tidal and water column processes. The potential applicant posed a list of questions, which are answered below:

Do you agree with the receptors outlined?

Yes, the relevant receptors have been identified.

Have all the relevant data sources been identified in this Scoping Report?

Yes

Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on marine physical environment receptors?

Yes, the measures outlines in Table 6.6 are appropriate and pragmatic.

Do you agree with the marine physical environment impacts that have been scoped in and out from further consideration within the EIA?

MD-SEDD advise that a qualitative assessment of the potential impacts on mixing and stratification is scoped into the EIA. MD-SEDD advise that within the scoping report, not enough evidence has been provided to justify this potential impact being scoped out of the EIA. The Scoping report presents outputs from an analysis of whether the WDA waters are stratified or well mixed, and concludes that

> "the WDA is situated within regions of intermittently stratified and permanently mixed marine environments (Figure 6.6). On average, the WDA is stratified between 20 and 40 days per year and mixed between 250 to 345 days each year."

It is not clear from the scoping report whether this intermediate stratification occurs for a short period of time every spring neap tidal cycle, or whether this only occurs during the summer months. MD-SEDD advise that evidence be supplied showing the typical time of onset and decay of stratification, e.g. from a 3D hydrodynamic model such as SSW-RS or data available from the Copernicus Marine Service, and a qualitative assessment of the potential impact of the OWF be conducted using best available evidence (e.g. https://doi.org/10.3389/fmars.2022.830927, https://doi.org/10.3389/fmars.2023.1178330). MD-SEDD advise the baseline description should include a description of prevailing baseline water column conditions, including the timing of stratification and frontal positions. This should include the evolution of water column structure through the year (e.g. weekly to monthly temperature, salinity, density profiles) and when typically the region stratifies, and how key parameters change through the year (e.g. surface mixed layer depth and potential energy anomaly).

MD-SEDD agree with the other potential impacts scoped in/out of the EIA.

Do you agree that water quality impacts can be scoped out of the assessment due to the negligible concentrations of contaminants present in the WDA and the use of industry-practice mitigation measures in the embedded mitigation?

MD-SEDD lack the adequate expertise to advise on this aspect of the scoping report.

Do you agree with the proposed approach to assessment with specific reference to numerical modelling?

There were little details provided on the assessment approach utilising numerical models, other than to say that appropriate models will be used. MD-SEDD advise that the following approach be adopted. A 2D hydrodynamic (tidal) model coupled to a spectral wave model be developed for the wider area. This model should be coupled in some form to bedload and suspended sediment transport models used for the assessment of the potential impacts outlined in Table 6.7. The spatial domain of the models should be sufficiently large to allow for assessment of impact on the WDA and relevant receptors identified as being potentially impacted by changes to modelled parameters (waves, currents, bedload and suspended sediment transport). This should include the physical receptors listed in Table 6.7 but also the relevant biological receptors identified in other chapters, such as benthic habitat. The wind farm structures will have to be appropriately parameterised within the models.

Do you have any other matters or information sources that you wish to be presented in the EIAR?

No

Yours sincerely,

Renewables and Ecology Team

Marine Directorate – Science, Evidence, Data and Digital

Transport Scotland

Development Management and Strategic Road Safety
Roads Directorate

George House 36 North Hanover St Glasgow G1 2AD
lain.clement@transport.gov.scot

TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

Abby Gray
Marine Directorate
Scottish Government
Marine Laboratory
Aberdeen
AB11 9DB

md.marinerenewables@gov.scot

Your ref:
SCOP0057

Our ref:
GB01T19K05

Date:
19/11/2024

Dear Sirs,

REGULATION 14 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

SCOTTISHPOWER RENEWABLES - MACHAIRWIND OFFSHORE WINDFARM - SCOTWIND W1 SITE, LOCATED OFF THE WEST COAST OF SCOTLAND, NORTHWEST OF ISLAY AND WEST OF COLONSAY.

With reference to your recent correspondence on the above development, we acknowledge receipt of the Scoping Report (SR) prepared by Scottish Power Renewables in support of the above development.

This information has been passed to SYSTRA Limited for review in their capacity as Term Consultants to Transport Scotland – Roads Directorate. Based on the review undertaken, Transport Scotland would provide the following comments.

Proposed Development

The proposed MachairWind Offshore Windfarm (OWF) comprises up to 147 turbines with a maximum blade tip height of 340m located off the west coast of Scotland, to the northwest of Islay and west of Colonsay. We note that the onshore grid connection point, while not yet confirmed, is expected to be located in South Ayrshire. The trunk road most likely to be affected by the connection point site is, therefore, the A77(T).

We understand that separate consents will be sought for three development areas, as follows:

- The Windfarm Development Area (WDA);
- The Offshore Transmission Development Area (OfTDA); and
- The Onshore Transmission Development Area (OnTDA).

Assessment of Environmental Impacts

We note that the SR states that separate Scoping Reports will be produced for the transmission infrastructure at a later date, however, we also note that the formal Scoping Opinion received as a result of the SR will inform the content and structure of the WDA EIA Report (EIAR) that will be produced to support the associated Marine Licence(s) applications and Section 36 application.

Transport Scotland would seek to ensure that any potential transport related impacts associated with the construction of both the OWF and the TDA are accounted for and, therefore, would request the following assessment be provided.

Transport Scotland would seek an assessment of traffic and associated environmental effects based upon the Institute of Environmental Management and Assessment (IEMA) Guidelines entitled Environmental Assessment of Traffic and Movement (July 2023). We would request that the thresholds as indicated within these Guidelines be used as a screening process for the assessment. These specify that road links should be taken forward for further assessment where the following two rules are breached:

> Rule 1: Include road links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)
>
> Rule 2: Include road links of high sensitivity where traffic flows have increased by 10% or more.

Base traffic for the study area should be established and factored to the peak construction year using National Road Traffic Forecasts (NRTF) Low Growth. A potential source of traffic data is Traffic Scotland's National Traffic Data System.

The peak traffic generation should be established and used to determine whether there are likely to be any significant environmental issues associated with increased traffic on the trunk road network, and any requirement for further trunk road assessment.

For any trunk road links where the thresholds are breached, Transport Scotland would seek the following list of impacts be assessed:

- Severance of communities
- Road vehicle driver and passenger delay
- Non-motorised user delay
- Non-motorised amenity
- Fear and intimidation on and by road users
- Road user and pedestrian safety
- Hazardous/large loads

Where significant changes in traffic are not noted for any link, no further assessment needs to be undertaken.

Abnormal Loads Assessment

In the event that turbine components are to be transported to site, in part, using the trunk road network, Transport Scotland will require to be satisfied that the size of loads proposed can negotiate the selected route and that their transportation will not have any detrimental effect on structures within the trunk road route path.

A full Abnormal Loads Assessment report should be provided with the EIAR that identifies key pinch points on the trunk road network. Swept path analysis should be undertaken, and details provided with regard to any required changes to street furniture or structures along the route.

I trust that the above is satisfactory but should you wish to discuss any issues raised in greater detail, please do not hesitate to contact myself or alternatively, Alan DeVenny at SYSTRA's Glasgow Office can assist on 0141 343 9636.

Yours faithfully

Redacted

Iain Clement

Transport Scotland
Roads Directorate

cc Alan DeVenny – SYSTRA Ltd.

Argyll and Bute Council

Argyll and Bute Council
Comhairle Earra Ghàidheal agus Bhóid

Development and Economic Growth

Council Offices 1A Manse Brae, Lochgilphead, Argyll, PA31 8RD Tel: 01546 604847

Marine Scotland
Mailpoint 11
1B South
Victoria Quay
Edinburgh
EH6 6QQ

3rd December 2024

Dear Abby Gray

REQUEST FOR A 'SCOPING OPINION' UNDER REGULATION 14 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017; AND REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 ('THE EIA REGULATIONS')

PROPOSAL: Scoping opinion for proposed Section 36 application for MachairWind Offshore Windfarm

SITE ADDRESS: ScotWind W1 site, located northwest of Islay and west of Colonsay, Argyll and Bute

LPA REFERENCE: 24/01899/SCRSCO

I write in reference to your scoping consultation of 17.10.2024 regarding the above proposal, which falls under Schedule 2 of the EIA Regulations 2017 as a 'generating station'. Please see the Council's scoping consultation response below.

The issuing of this scoping consultation advice should not be taken to indicate support for the proposal on the part of Argyll & Bute Council. The Council's conclusions on any future consultation would rely upon the consideration of the content of any accompanying environmental information, the responses of consultees, the views of third parties and any other material planning considerations.

Please note that in terms of National Planning Framework 4 and the Argyll & Bute Local Development Plan 2 and associated Supplementary Guidance, renewable energy developments will be assessed against the following criteria:

- Net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities;
- Impacts on communities and individual dwellings, including, residential amenity, visual impact, noise and shadow flicker;
- Landscape and visual impacts;
- Public access, including impact on long distance walking and cycling routes and scenic routes;
- Impacts on aviation and defence interests including seismological recording;
- Impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;
- Impacts on road traffic and on adjacent trunk roads, including during construction;
- Impacts on historic environment;
- Effects on hydrology, the water environment and flood risk;
- Biodiversity including impacts on birds;
- Impacts on trees, woods and forests;
- Proposals for the decommissioning of development, including ancillary infrastructure, and site restoration;
- The quality of site restoration plans including the measures in place to safeguard or guarantee availability of finances to effectively implement those plans;
- The scale of contribution to renewable energy generation targets.
- Effect on greenhouse gas emissions.
- Impacts on carbon rich soils.
- Impacts on tourism and recreation.
- Opportunities for energy storage.
- Cumulative impacts.

Should you require anything further please do not hesitate to contact me.

Yours sincerely

Shelley Gould MRTPI
Senior Planning Officer
Major Applications Team
Development & Economic Growth

ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017, REGULATION 12

SCOPING CONSULTATION RESPONSE ON BEHALF OF ARGYLL & BUTE COUNCIL

THE SITE & PROPOSAL

The proposed development is for the ScottishPower Renewables (SPR) MachairWind Offshore Windfarm - ScotWind W1 Site, located off the west coast of Scotland, northwest of Islay and west of Colonsay.

The Windfarm Development Area (WDA) is expected to comprise of the following infrastructure components:

- Up to 147 Wind Turbine Generators (WTGs) on fixed foundations;
- Inter-Array Cables (IACs) linking the WTGs together and to the Offshore Substation Platform (OSP)(s);
- Scour protection for foundation structures supporting the WTGs (if required); and
- External cable protection for IACs (if required).

Based on the likely wind turbine generators (WTG) available at the time the Project enters construction, a project design envelope has been established which includes both (i) 147 of the smallest wind turbine generators (WTG) at a height of 260 as well as (ii) 88 of the largest WTGs at a height of 340m.

In June 2018, the sectoral marine planning process for offshore wind was subject to a process of public consultation and assessment. The Scoping Report identified an initial 3 Areas of Search (AoS) in the West region. The Plan Option areas off the coast of Argyll were identified as West 1 (W1), West 2 (W2), and West 3 (W3). These 3 AoS were subsequently reviewed and updated, resulting in the identification of 1 Draft Plan Option (DPO) taken forwards for further assessment. After review and refinement, the W1 DPO has changed shape and moved to a new area with the West region in an effort to avoid major conflicts of interests to wildlife and socio-economics.

W1 DPO has an area of 1107 km^2 and would lie approximately 5km north of Islay's north coast and approximately 15km south of the Ross of Mull.

Since the ScotWind award in January 2022, the Applicant has undertaken a further review of potential constraints within the Option Agreement Area (OAA). This resulted in an initial reduction of the whole OAA, comprising 754 km^2 and again down to the WDA boundary comprising 510 km^2.

The proposal would have the potential to generate 2 gigawatts of energy. The proposed Development would be decommissioned after 35 years and the site restored in accordance with the decommissioning and restoration plan.

Overall scoping and scoping comments

The proposal must conform to all relevant National Planning Framework 4 (NPF4) policies National Planning Framework 4, National Marine Plan (NMP) policies Scotland's National Marine Plan: A Single Framework for Managing Our Seas, all relevant and general policies of the Local Development Plan 2 Argyll and Bute LDP2 Written Statement Feb 2024.

It is expected that the majority of environmental monitoring will be undertaken by the Applicant as part of pre-construction, construction, and post construction monitoring as part of the planning and licensing process.

Many of the potential impacts of the proposal cannot be determined until further progress has been made on the location for the construction and operational bases. An O&M strategy will cover all O&M activities required for each infrastructure component and provide information on the expected vessels usage and how these will be implemented throughout the operational lifetime of the Project.

The Council considers that the content of the 'Scoping Report' is broadly acceptable, and that the proposed scope of the environmental assessments detailed therein will form a generally appropriate structure for EIA Report (EIAR) preparation. In accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, Argyll and Bute Council would comment as follows on the information to be provided in the EIAR.

DESCRIPTION OF THE DEVELOPMENT

The description of development for the EIAR must include:

- A description of the physical characteristics of the whole development and the full land use requirements during the operational, construction and decommissioning phases;
- A description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;
- The risk of accidents, having regard in particular to substances or technologies used;
- An estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light/flicker, heat, radiation, etc.) resulting from the operation of the development; and
- The estimated cumulative impact of the project with other consented or operation development.

ALTERNATIVES

The EIAR should include a statement which outlines the main development alternatives studied by the applicant and an indication of the main reasons for the final project choice. It is noted that the site selection process has been determined through the Scottish Government Sectoral Marine Plan (SMP) for Offshore Wind (Oct 2020) and is located within one of the 15 Plan Option Areas identified in the SMP.

This is expected to highlight the following: the range of technologies that may have been considered; locational criteria and economic parameters used in the initial site selection; options for access; design and locational options for all elements of the proposed development (including grid connection); and the environmental effects of the different options examined. Such assessment should also highlight sustainable development attributes including for example assessment of carbon emissions / carbon savings.

CUMULATIVE IMPACT

There is a high level of commercial scale wind energy development within Argyll and Bute. The proposed development will be seen in combination with other wind energy developments and transmission infrastructure and will further extend the number of proposals of this type in the surrounding area, necessitating appropriate assessments of cumulative impacts. Cumulative impact will be a significant material consideration in the final determination of any future application and should be fully addressed in the EIAR. It is recommended that consultation is undertaken with the Energy Consents Unit to identify any other S36 schemes which may advance at the same pace as this proposal and have cumulative impacts, particularly in construction phases e.g. Eredine, Ladyfield, Blarghour Variation, An Carr Dubh and Musdale.

RESPONSES TO SCOPING CONSULTATION QUESTIONS

Chapter 6 – Marine Physical Environment

1. ***Do you agree with the receptors outlined?***
   Yes, all marine physical environmental receptors appear to have been discussed.

2. ***Have all the relevant data sources been identified in this Scoping Report?***
   Yes, all relevant data sources appear to have been identified within the Scoping Report.

3. ***Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on marine physical environment receptors?***
   Yes. With reference to M-8 Cable Plan, I would advise that where environmental conditions allow cable burial should be at a minimum depth of 1.5 m below the seabed. This would avoid significant effects on benthic receptors, as per discussed in *Table 8.8 Potential impacts scoped in or scoped out for benthic ecology*.

4. ***Do you agree with the marine physical environment impacts that have been scoped in and out from further consideration within the EIA?***
   Yes, in agreement with the scoping in and out of the EIA.

5. ***Do you agree that water quality impacts can be scoped out of the assessment due to the negligible concentrations of contaminants present in the WDA and the use of industry-practice mitigation measures in the embedded mitigation?***
   Yes

6. ***Do you agree with the proposed approach to assessment with specific reference to numerical modelling?***
   Yes, but this is more of a question for NatureScot to consider.

7. ***Do you have any other matters or information sources that you wish to be presented in the EIAR?***
   No

Chapter 7 – Offshore Air quality

The Council would defer to the opinion of other organisations with expertise in offshore air quality.

Chapter 8 – Benthic Ecology

1. ***Do you agree with the characterisation of the existing environment?***
   Yes, the characterisation of the existing environment appears to be correct.

2. ***Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on benthic receptors?***
   Yes, in agreement with the embedded mitigation measures described.

3. ***Have all benthic ecology impacts resulting from the WDA been identified in the Scoping Report?***
   All benthic ecology impacts appear to have been identified. With reference to M-8 Cable Plan, I would advise that where environmental conditions allow cable burial should be at a minimum depth of 1.5 m below the seabed. This would avoid significant effects on benthic receptors, as per discussed in *Table 8.8 Potential impacts scoped in or scoped out for benthic ecology*.

4. ***Do you agree with the benthic ecology impacts that have been scoped in and out from further consideration within the EIA?***
   Yes, in agreement with the scoping in and out of the EIA.

5. ***Have all the relevant data sources been identified in the Scoping Report?***
   All relevant data sources appear to have been identified in the Scoping Report. NatureScot should be able to confirm this.

6. ***Do you agree with the proposed approach to assessment?***
   Yes, the approach to the assessment appears to be satisfactory.

7. ***Do you have any other matters or information sources that you wish to be presented in the EIAR?***
   No

Chapter 9 – Fish (Including Basking Shark) and Shellfish Ecology

1. ***Do you agree that the existing data available to describe the fish and shellfish ecology baseline remains sufficient to describe the baseline environment in relation to the WDA?***
   Yes, agree that the data presented appears to be sufficient to describe the baseline environment.

2. ***Are there any further desktop datasets which you would recommend are included?***
   No, however NatureScot should be able to further advise.

3. ***Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on commercial fisheries receptors?***
   Yes, agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on commercial fisheries receptors.

4. ***Do you agree that all potential impacts have been identified for fish and shellfish ecology?***
   Yes, agree that all potential impacts have been identified for fish and shellfish ecology.

5. ***Do you agree with the potential impacts scoped in and out?***
   In general, yes. With regards to the *Potential Impact* of *Permanent Habitat Loss* in *Table 9.9 Potential impacts scoped in or scoped out for fish (including basking shark) and shellfish ecology*, as long as it is acknowledged that permanent habitat loss begins at the construction phase and continues through to decommissioning.

6. ***Do you agree with the proposed approach to the EIA?***
   Yes, in agreement with the proposed approach to the EIA.

7. ***Do you have any other matters or information sources that you wish to be presented in the EIAR?***
   No, however NatureScot may have further information sources.

Chapter 10 – Marine Mammals

1. ***Do agree with the proposed data sources? Are there any further data sources to be aware of?***
   In general, yes. NatureScot may have further data sources.

   It is recognised that there is uncertainty in the baseline data for marine mammal distributions foraging within or migrating through west coast waters, and therefore, whilst

this assessment considers currently available data, it is expected that a detailed project level survey will include possible routes and movements of cetaceans and seals before construction commences to establish a robust baseline against which an assessment can be made.

The Hebridean Whale and Dolphin Trust (HWDT) data request for raw effort and sightings / Passive Acoustic Manitoring (PAM) data within the Option Agreement Area (OAA) would be welcomed.

The ObSERVE II Surveys would be welcomed and if possible, should be incorporated into the EIA for the most recent available data.

2. ***Do you agree with the marine mammal species to be scoped in, the reference populations, and the densities to be used for assessments?***
   Yes, in agreement with the marine mammal species to be scoped in, the reference populations, and the densities to be used for assessments.

3. ***Do you agree with the potential impacts scoped in and out?***
   Yes, in general agreement with the potential impacts scoped in and out.

   Under Table 10.7 *Potential impacts scoped in or scoped out for marine mammals – Direct Effects from Electro-Magnetic Fields*, I would however express concern that relates to the proposed cable laying of sub-sea cables. I would advise that where environmental conditions allow, cable burial should be at a minimum depth of 1.5 m below the seabed to reduce their potential impact to marine mammals.

4. ***Do you advise to use the updated draft marine mammal underwater noise thresholds from National Marine Fisheries Service (NMFS) (2024), or the thresholds published in Southall et al., (2019)?***
   I would advise that the Applicant use the most recent data from the updated draft marine mammal underwater noise thresholds from the National Marine Fisheries Service. However, this would be subject to NatureScot's recommendations.

5. ***Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on marine mammal receptors?***
   Yes, in agreement with the proposed embedded mitigation measures. Particularly welcome the development of the Marine Mammal Mitigation Protocol (MMMP), the development of a Cable Plan that will incorporate a Cable Burial Risk Assessment (CBRA), and the development of a Project Environmental Management Plan (PEMP).

6. ***Do you agree with the approach to underwater noise modelling, and the thresholds to be used (see Appendix G Marine Mammals and Turtles Approach to Assessment)?***
   Yes, in general agreement with the proposed approach to underwater noise modelling, subject to NatureScot's recommendations.

7. ***Do you agree with the proposed approaches to assess the potential for disturbance due to underwater noise?***
   Yes, in general agreement with the proposed approaches to assess the potential for disturbance due to underwater noise, subject to NatureScot's recommendations.

8. ***Do you agree with the approach to cumulative assessments, and the use of population modelling?***
   Yes, in general agreement with the proposed approach to cumulative assessments and the use of population modelling, subject to NatureScot's recommendations.

9. Do you have any other matters or information sources that you wish to be presented in the EIAR?
No

Chapter 11: Offshore Ornithology

1. Do you agree that the existing data available to describe the offshore ornithology baseline remains sufficient to describe the baseline environment in relation to the WDA?
Yes, I agree that the existing data available is sufficient to describe the baseline environment.

2. Are there further data desktop datasets which you would recommend are included?
No, all existing datasets are acceptable.

3. Do you agree that all potential impacts have been identified for offshore ornithology?
Yes, I agree that all potential impacts have been identified.

4. Do you agree with the potential impacts scoped in and out for the EIA?
Yes, I agree with the potential impacts scoped in and out for the EIA.

5. Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on offshore ornithology receptors?
I agree with the following proposed mitigation measures:

- Inclusion of a Project Environmental Management Plan (PEMP) to manage environmental risks associated with the construction and operation of the offshore components of the Project.
- Inclusion of a Marine Pollution Contingency Plan (MPCP) to provide guidance to the Project personnel, contractors and subcontractors on the actions and reporting requirements in the event of spills and collision incidents.
- The smallest size of turbine has been selected to reduce the number required to be installed.
- A blade tip clearance height / Air Gap of at least 22m above high water springs to reduce collision rates between seabirds and operational WTGs.
- The development and adherence to a Decommissioning Programme.

6. Do you agree that the impact assessment should be based only on the project's DAS and that the third-party DAS data should be excluded (i.e. third-party data should only be used to inform baseline characterisation)?
I note the applicant is in discussions with NatureScot regarding the inclusion of the Project DAS data only and I agree with these findings.

7. Do you agree with the use of 30 samples of aerial bird densities being used in collision risk modelling, or should aerial bird densities from incomplete seasons be excluded from the analyses?
I note the applicant is in discussions with NatureScot and I agree with their findings for the use of 30 samples of aerial densities being used in collision risk modelling.

8. Do you agree with the scoping out of the migratory species listed in Appendix I Offshore Ornithology Methods Statement?
I agree with the scoping out of migratory species listed in Appendix I Offshore Ornithology Methods Statement.

9. Do you have any other matters or information sources that you wish to present?

Comment: No

Chapter 12 – Commercial Fisheries

1. ***Do you agree with the Study Areas defined for commercial fisheries?***
   Yes, in general agreement. However, I would expect appropriate discussions and agreements with the commercial fisheries sector and their representatives (including consideration of financial impacts on this sector).

2. ***Do you agree with the data sources to be used to characterise the commercial fisheries baseline within the EIA?***
   Yes, in general agreement. However, I would expect appropriate discussions with the commercial fisheries sector and their representatives.

3. ***Are there any additional data sources or guidance documents that should be considered?***
   None that I am aware of. However, I would expect appropriate discussions on any additional data sources with the commercial fisheries sector and their representatives.

4. ***Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on commercial fisheries receptors?***
   Yes, in general agreement, subject to the commercial fisheries sector recommendations.

5. ***Do you agree with the scoping in and out of impact pathways in relation to commercial fisheries?***
   Yes, in general agreement to scope in and scope out of impact pathways as per recommended. However, impact pathways 1 and 6 described in *Table 12.5 Potential impacts scoped in or scoped out for commercial fisheries* are more relevant for the commercial fisheries sector and their representatives to answer.

6. ***Do you agree with the proposed assessment methodology for commercial fisheries?***
   Yes, in general agreement, subject to the commercial fisheries sector recommendations.

7. ***Do you have any other matters or information sources that you wish to be presented in the EIAR?***
   No

Chapter 13 – Shipping and Navigation

1. ***Is the legislation, policy and guidance proposed for consideration as part of the EIA (notably including the NRA for shipping and navigation) suitable and sufficient?***
   The legislation, policy and guidance proposed as part of the EIA appears to be suitable. However, I would suggest further consultation with the shipping and navigation consultees as listed in section *13.12 Approach to Impact Assessment*, paragraph *667*. In addition, I would suggest that Argyll and Bute Harbour Authority and CMAL are consulted.

2. ***Is the Study Area defined, data sources considered, and proposed data sources to inform the NRA suitable and sufficient (noting that the requirements of MGN 654 have been applied in the proposed approach)?***
   As per above, I would suggest that Argyll and Bute Harbour Authority and CMAL are consulted upon.

3. ***Is the methodology outlined for undertaking the risk assessment suitable, including on a cumulative level?***
   I would suggest that Argyll and Bute Harbour Authority and CMAL are consulted upon.

4. ***Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on shipping and navigation receptors?***
   Yes, in general agreement that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA. I would also suggest that the views of Argyll and Bute Harbour Authority and CMAL are relevant.

5. ***Have all potential hazards (impacts) due to the presence of the WDA been identified for shipping and navigation users?***
   All potential hazards appear to have been identified, but I would strongly suggest consulting with the Northern Lighthouse Board (NLB) and Argyll and Bute Harbour Authority on this matter.

6. ***Are the mitigation measures described suitable and sufficient for managing and mitigating risk associated with the potential hazards?***
   Mitigation measures appear to be suitable for managing and mitigating risk associated with the potential hazards associated with the WDA. I would strongly recommend further consultation with the NLB and Argyll and Bute Harbour Authority on this matter.

7. ***Do you have any other matters or information sources that you wish to be presented in the EIAR?***
   No

Chapter 14 – Offshore archaeology and Cultural Heritage

The Council understands that advice from relevant consultees with expertise in this field will be sought in this regard.

Chapter 15 – Military and Civil Aviation

The Council understands that advice from relevant consultees with expertise in this field will be sought in this regard.

Chapter 16 – Seascape, landscape and visual impacts

1. ***Is the proposed SLVIA Study Area appropriate?*** Yes.

2. ***Have all the relevant data sources been identified in the Scoping Report?*** Yes.

3. ***Are there any comments on the overall methodology proposed to assess effects on seascape, landscape and visual receptors, or to assess cumulative effects?***
   It is noted from the Scoping Report that the potential effects of the proposed development on landscape character and visual amenity will be assessed through a Landscape and Visual Impact Assessment (LVIA), which will follow GLVIA, 3rd Edition and NatureScot advice/guidance on good practice for landscape and visual assessment of wind farm proposals. This is agreed as appropriate guidance for the assessment. All elements of a development are important to consider within any EIAR.

4. ***Are there any comments on the proposed list of assessment viewpoint locations and/or suggested visualisations?***
   No, it is welcomed that number of view points as suggested by the local communities have been included in the methodology for the SLVIA.

5. ***Are there any further seascape, landscape or visual receptors that should be considered within the assessment (i.e. where it is expected that significant effects may occur)?*** No.

6. ***Do you agree with the proposed approach to coastal character assessment, within 30 km of the WDA?***
   The boundary of 30km should be extended to include the South West and South and East LLAs of Islay which fall within the ZTV at distances of 30km to 40km.

7. ***Do you agree with the seascape, landscape and visual impacts and receptors that have been scoped in and out from further consideration within the EIA?*** Yes.

8. ***Do you agree that transboundary effects can be scoped out?*** Yes.

9. ***Are there any other relevant consultees who should be consulted with respect to the SLVIA?***
   We are satisfied that all relevant consultees have been engaged. We would defer to the expertise of NatureScot on Seascape matters.

10. ***Do you have any other matters or information sources that you wish to be presented in the EIAR?***
    No.

Chapter 17 – Infrastructure and Other Marine Users

1. ***Do you agree with the data sources used to characterise the infrastructure and other marine users' baseline?***
   Yes, in agreement with the data sources used to characterise the infrastructure and other marine users' baseline, however it will be important to consult with the CMAL, MOD, MCA and NLB.

2. ***Are there any further desktop datasets which you would recommend are included?***
   No information on this.

3. ***Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on infrastructure and other marine user receptors?***
   As mentioned in earlier sections, in general yes. However, I note that under section *17.8 Mitigation Measures, M-8 Cable Plan* in *Table 17.3 Indicative embedded mitigation measures for infrastructure and other marine users* states that the Applicant plans to bury cables to a minimum a target burial depth of 0.5 m. Where under *Table 8.8 Potential impacts scoped in or scoped out for benthic ecology* of the Scoping Report it states: *Where cables are buried to sufficient depth, significant effects on benthic receptors are not expected. The United Kingdom (UK) National Policy Statement for Renewable Energy Infrastructure (EN-3) states that where cables are buried to 'a depth of at least 1.5 m below the seabed, the applicant should not have to assess the effect of the cables on benthic habitats during the operational phase of the offshore wind farm'. It is currently expected that cables will be buried where practicable, but the target depth will vary depending on the ground conditions encountered.*

   It will therefore be important that cable burial will be at a minimum depth of 1.5 m below the seabed, where environmental conditions allow.

4. ***Have all the potential impacts on infrastructure and other marine users resulting from the WDA been identified in this Scoping Report?***
   All potential impacts on infrastructure and other marine users appear to have been identified. However, I advise that that the Applicant consult with the MOD, MCA, NLB, CMAL, and the RYA if they have not already done so.

5. ***Do you agree with the impacts that have been scoped in or scoped out for further assessment in the EIA?***
   In general agreement with the impacts that have been scoped in and scoped out.

6. ***Do you have any other matters or information sources that you wish to be presented in the EIAR?***
   One of the proposed cable landings is on the West Coast of Islay, the public roads leading to this location are extremely vulnerable to extraordinary traffic. Many of the roads are single track, lightly constructed and are built on peat. Additional information relating to the impacts of any land-based works will be required as part of the EIAR.

Chapter 18 – Socio-economics

1.Do you agree with the characterisation of the existing environment? Yes.

2. Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the Project on socio-economics receptors?
Yes. It would be helpful to understand where the build base is likely to be located for the construction phase to help to understand local impacts around that location (understood to be likely to be elsewhere on the West Coast) but also to determine whether during this period infrastructure/accommodation will be required on Islay to facilitate construction activities. There may be implications for housing, ferry transport, local road network, local services and facilities etc which should be considered.

3. Have all the socio-economic impacts resulting from the Project been identified in this Scoping Report? Yes.

4. Do you agree with the socio-economic impacts that have been scoped in / out from further consideration within the EIA?
We welcome the wide range of potential socio-economic impacts 'scoped in' for the construction, operational and decommissioning phases of the project. We would like to see training and education opportunities considered under the 'Socio-cultural effects' and 'Changes to labour market' – there is an opportunity to 'grow' local employment skills to meet the needs of this project and contribute to improved socio-economic outcomes for local communities.

7. ***Have all the relevant data sources been identified in the Scoping Report?*** Yes.

8. ***Do you agree with the proposed approach to assessment in the EIA?***
   Yes. However, it will be important to consider 'legacy effects' of the project in relation to housing demand and other infrastructure. There should be some weight placed on the positive impact that the provision of workers housing can achieve in the long term for communities – either through delivery of serviced sites (if temporary workers accommodation is used) or through reuse of housing delivered.

   'Changes to labour market' – as noted above there is an opportunity to 'grow' local supply chains and employment skills to meet the needs of this project and contribute to improved socio-economic outcomes for local communities. The 'baseline labour supply' should also consider direct, indirect and induced job creation, including support for developing the local supply chain and opportunities for skills, development and training. It is important to understand the potential opportunities for jobs and supply chain development for the Islay

community and wider Argyll and Bute as well as the project as a whole – any impacts on schools/Argyll College/UHI should be explored.

9. ***Do you have any other matters or information sources that you wish to be presented in the EIAR?***
   We welcome inclusion of 'The mitigation of fuel poverty and support of net-zero targets through energy supply benefits from the Project.' The potential for a power supply onto Islay to support the local electricity supply, benefits which could be delivered to the community should be considered.

Chapter 19 – Climate change

The Council is satisfied with the intended approach as detailed in the Scoping Report.

Chapter 20 – Major Accidents and Disasters

1. ***Do you agree with the scope proposed for the major accidents and disasters chapter of the WDA EIAR?***
   Yes, in agreement with the scope proposed for the major accidents and disasters for the WDA EIAR.

2. ***Is there any further guidance and policy which you would recommend is included?***
   No

3. ***Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of major accidents and disasters receptors?***
   Yes, agree with the proposed embedded mitigation measures described.

4. ***Have all the potential impacts on major accidents and disasters been identified in this Scoping Report?***
   Yes, they appear to have been. However, I advise that that the Applicant consult with the MCA, and the NLB, if they have not already done so.

5. ***Do you agree with the hazards and risks that have been scoped in or scoped out for further assessment in the EIA?***
   Yes, in agreement with the hazards and risks that have been scoped in and out for further assessment.

6. ***Do you have any other matters or information sources that you wish to be presented in the EIAR?***
   No

7. ***Do you agree with the proposed approach to setting out the major accidents and disasters in the WDA EIAR?***
   Yes, in agreement with the proposed approach to setting out the major accidents and disasters in the WDA EIAR.

<u>Habitats Regulations Appraisal (HRA) screening report comments</u>

In terms of the Applicant's HRA screening report, I am in agreement with the European sites identified, of which include Chapter 4 - Sites Designated for Annex I Habitats, Chapter 5 - Sites Designated for Annex II Diadromous Fish, and Chapter 6 -Sites Designated for Annex II Marine Mammals. In addition, I am in general agreement with the range of potential impacts on marine mammal receptors that have been identified during the construction, O&M and

decommissioning phases of the WDA as per discussed in *Table 6.3 Potential impacts screened in or screened out for marine mammals*.

Shelley Gould MRTPI
Senior Planning Officer
Major Applications
3rd December 2024

Department of Agriculture, Environment and Rural Affairs (DAERA)

ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site - Scoping and HRA Consultation

Marine Conservation Branch

DAERA Marine and Fisheries Division welcome the opportunity to comment on this proposal. After reviewing the associated documents, we are content that those Northern Ireland Marine Protected Areas that are within the screening ranges for marine mammals have been included.

We would highlight an error in section 105 of the HRA Screening Report which states: *Harbour porpoise is a qualifying species for the Skerries and Causeway SAC which is located on the north coast of Northern Ireland covering 0.1 km^2* **– this is incorrect the value should be 108.62km^2**.

Maritime and Coastguard Agency (MCA)

Vinu John
Maritime and Coastguard Agency
UK Technical Services - Navigation
Bay 2/24
Spring Place
105 Commercial Road
Southampton
SO15 1EG

www.gov.uk/mca

Abby Gray
Marine Directorate – Licensing Operations Team
Marine Licencing and Consenting
Scottish Government
Marine Laboratory
Aberdeen
AB11 9DB

Your Ref: SCOP-0057

Date: 22nd November 2024

Via email: MD.MarineRenewables@gov.scot

Dear Abby,

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATIONS FROM SCOTTISHPOWER RENEWABLES - MACHAIRWIND OFFSHORE WINDFARM - SCOTWIND W1 SITE, LOCATED OFF THE WEST COAST OF SCOTLAND, NORTHWEST OF ISLAY AND WEST OF COLONSAY.

The MCA has reviewed the scoping report provided by Scottish Power Renewables for the MachairWind Offshore Wind Farm Limited as detailed in your correspondence of 17th October 2024 and would like to comment as follows:

The Environmental Impact Report should supply detail on the possible impact on navigational issues for both commercial and recreational craft, specifically:

- Collision Risk.
- Navigational Safety.
- Visual intrusion and noise.
- Risk Management and Emergency response.
- Marking and lighting of site and information to mariners.
- Effect on small craft navigational and communication equipment.
- The risk to drifting recreational craft in adverse weather or tidal conditions.
- The likely squeeze of small craft into the routes of larger commercial vessels.

The development area carries moderate traffic with several important commercial shipping routes to/from UK ports. Attention needs to be paid to routing, particularly in heavy weather so that vessels can continue to make safe passage without large-scale deviations. The likely cumulative and in combination effects on shipping routes should be considered for this project. It should consider the proximity to other windfarm developments, other infrastructure, and the impact on safe navigable sea

room. We note that the proposed windfarm development area (WDA) is closing off the Dubh Artach Lighthouse to the vessels navigating West, Southwest and Southeast of the wind farm, we recommend the applicant to consult with Northern Lighthouse Board (NLB) regarding this and consider impacts on local AtoNs as a risk within the EIAR and NRA.

We note that within the section 13.12 of the scoping report that a Navigational Risk Assessment will need to be submitted in accordance with MGN 654. This NRA should be accompanied by a detailed MGN 654 Checklist which can be found at https://www.gov.uk/guidance/offshore-renewable-energy-installations-impact-on-shipping

Furthermore, we note that, vessel traffic surveys to the standard of MGN 654 – at least 28 days which is to include seasonal data (two x 14-day surveys) collected from a vessel-based survey using AIS, radar and visual observations to capture all vessels navigating in the study area has already been completed in Dec 2023 (Winter) and Aug 2024 (Summer). We are content with the data presented in the scoping report to inform traffic volumes/routes/types at this stage. We note that the MGN 654 compliant data will be presented within the NRA.

We understand that a Cumulative Effects Assessment will be carried out in a tiered system of appraisal as detailed in the Scoping report. As highlighted, the proximity to other offshore windfarms and infrastructure will need to be fully considered, with an appropriate assessment of the distances between OREI boundaries and shipping routes as per MGN 654. Attention must be paid to the traffic to ensure the established shipping routes within the area can continue safely without unacceptable deviations.

Attention should be paid to cabling routes and where appropriate burial depth for which a Burial Protection Index study should be completed and subject to the traffic volumes, an anchor penetration study may be necessary. If cable protection measures are required e.g., rock bags or concrete mattresses, the MCA would be willing to accept a 5% reduction in surrounding depths referenced to Chart Datum. This will be particularly relevant where depths are decreasing towards shore and potential impacts on navigable water increase, such as at the HDD location. It is noted that a Cable Burial Risk Assessment (CBRA) and Cable Plan (CaP) have been included in the embedded mitigations as per Table 13.5 of the scoping report.

The Development Specification and Layout Plan (DSLP) referred to in table 13.5 requires MCA approval before construction to minimize the risks to surface vessels, including rescue boats, and Search and Rescue aircraft operating within the site. Any additional navigation safety and/or Search and Rescue requirements, as per MGN 654 Annex 5, will be agreed upon at the approval stage.

Particular consideration will need to be given to the implications of the site size and location on SAR resources and Emergency Response Co-operation Plans (ERCoP). The report must recognise the level of radar surveillance, AIS and shore-based VHF radio coverage and give due consideration for appropriate mitigation such as radar, AIS receivers and in-field, Marine Band VHF radio communications aerial(s) (VHF voice with Digital Selective Calling (DSC)). A SAR checklist will also need to be completed in consultation with MCA, as per MGN 654 Annex 5 SAR requirements.

MGN 654 requires that hydrographic surveys should fulfil the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data supplied as a digital full density data set, and survey report to the MCA Hydrography Manager. Further information can be found in MGN 654 Annex 4 supporting document titled ‘Hydrographic Guidelines for Offshore Developers’,

available on our website: https://www.gov.uk/guidance/offshore-renewable-energy-installations-impact-on-shipping. This includes surveys during the pre-construction, post-construction and post-decommissioning stages. We would like to highlight the need to provide the data in either GSF or CARIS format and that Total Vertical and Horizontal Uncertainty (TVU & THU) calculations must be provided.

We note within the Executive Summary that Consenting of the Windfarm Development Area will commence first. Once the location for the new HVDC switching station in South Ayrshire has been identified, the Applicant will progress separate consent applications for the OfTDA and OnTDA. Each consent application and associated assessments will take account of the wider Project.

If an HVDC transmission cable is used, A study should be undertaken to establish the electromagnetic deviation, affecting ship compasses and other navigating systems, of the high voltage cable route to the satisfaction of the MCA. On receipt of the study, the MCA reserves the right to request a deviation survey of the cable route post installation.

Within Table 13.6, we note that the project has not identified Impacts on safe access to ports as a potential impact of the project, we would like to request the applicant to include this as an impact within the EIAR, we believe this will be applicable during construction, operation and decommissioning phases. The WDA is located in the mouth of the Firth of Lorn which has a considerable amount of international and local traffic.

On the understanding that the Shipping and Navigation aspects are undertaken in accordance with MGN 654 and its annexes, along with a completed MGN checklist, MCA is likely to be content with the approach.

Yours faithfully,

Redacted

Vinu John
Navigation Advisor
UK Technical Services Navigation

Ministry of Defence (MOD)

Defence Infrastructure Organisation

Stefany Alves Veronese
Ministry of Defence
Safeguarding Department
DIO Head Office
St George's House
Whittington
Lichfield
Staffordshire
WS14 9PY

Mobile: [Redacted]

E-mail: stefany.alvesveronese100@mod.gov.uk

Your Ref: SCOP-0057
DIO Ref. DIO10056872

Abby Gray
Marine Licensing and Consenting Casework Officer
Licensing Operations Team
Marine Directorate
Scottish Government
Atlantic Quay
Glasgow
G2 8LU

21 November 2024

Dear Abby,

REGULATION 14 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 (collectively referred to as the "EIA Regulations").

ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site, located off the west coast of Scotland, northwest of Islay and west of Colonsay.

Thank you for consulting the Ministry of Defence (MOD) on the above detailed Scoping Opinion in respect of the MachairWind Offshore Wind Farm development. Consultation correspondence was received by this office on 17 October 2024.

The Defence Infrastructure Organisation (DIO) Safeguarding Team represents the MOD as a consultee in UK planning and energy consenting systems to ensure that development does not compromise or degrade the operation of defence sites such as aerodromes, explosives storage sites, technical sites, training resources such as the Military Low Flying System or maritime defence assets and interests.

It is acknowledged that, at this time, details of the precise location, dimensions, and configuration of the wind turbines and associated infrastructure is not available and that a Project Design Envelope (PDE) approach has been adopted for this array project. The components of the array project will include the following:

- Up to 147 Wind Turbine Generators (WTGs) on fixed foundations;
- Inter-Array Cables (IACs);
- If required, scour protection for foundation structures supporting the WTGs; and
- If required, external cable protection for IACs.

The maximum blade tip height of the wind turbines (metres (m) above Lowest Astronomical Tide (LAT)) is expected to be no greater than 340m, with a maximum rotor diameter of 316m.

I write to confirm the safeguarding position of the MOD on information that should be taken into account in the preparation of an Environmental Statement and any associated application(s). This response is based on the Windfarm Development Area Scoping Report dated September 2024 (Document Reference. MCW-GEN-PMG-REP-IBR-000068, Rev 1). This recognises some of the principal defence issues that will be of relevance to the progression of the proposed development.

Military Low Flying Training

The wind farm development area (WDA) is located within Low Flying Area (LFA) 14 of the UK Military Low Flying System in which military aircraft may engage in low level flying activities.

Military aviation has been considered in the scoping report at section 15.7.2. This appropriately identifies and considers different types of designated airspace assigned for defence activities. As part of this evaluation, the potential for the proposed wind farm to create a physical obstruction hazard to military low flying training activities that may be conducted in this area has not been specifically identified. However, at section 15.7.1, the applicant has identified that the airspace above the WDA is class G, uncontrolled airspace, up to approximately 19,500 feet above mean sea level and that this airspace is predominantly used for low level flying operations.

The potential for the proposed development to create physical obstructions to low flying aircrafts identified as a matter that needs to be scoped in in relation to all stages of the life of the proposed development (ref. section15.9 -table 15.4). It is noted that embedded mitigation has been identified which includes the provision of a lighting and marking plan which will include the provision of aviation warning lighting (ref. sections15.8 - table 15.3 and section 20.8 – table 20.3). The submission identifies that aviation lighting and marking will be installed in accordance with Article 223 of the United Kingdom (UK) Air Navigation Order 2016. In addition to this, the applicant should recognise that aviation lighting will need to also address MOD aviation lighting requirements which may differ to those required to meet civil standards.

Defence Maritime Training and Operational Interests

The scoping report submitted has accurately identified that the wind farm development area does occupy MOD Navy Exercise Areas X5626 Mackenzie, X5539 Orsay and X5543 Colonsay which are used to conduct naval training activities (ref. Section 17.7.2). In addition, it should also be recognised that the WDA will also affect defence maritime navigational interests that are also located within this area relating to submarine operations and highly surveyed routes retained to support national defence requirements. All these defence maritime assets and interests need to be taken into account in the preparation of an application for this proposed development.

The scoping report has determined that impacts upon MOD maritime navigational interests need to be scoped in for the preparation of an Environmental Impact Assessment in relation to all stages of the life of the development proposed (ref. Section 17.9 -Table 17.4). This is endorsed by the MOD. However, the definition of MOD maritime navigational interests should be used to cover the use of Exercise Areas for training, defence maritime navigational interests and highly surveyed routes.

Unexploded Ordnance (UXO)

The potential for unexploded ordnance (UXO) to be present within the development area and the need to undertake pre-installation works to address this has been recognised (ref. Sections 3.4.2, 3.5.1, 3.5.2 and 3.5.3.1). Embedded mitigation measures have been defined which include the management of any UXO that may be discovered (ref. Section 9.8-Table 9.8).

I trust this is clear however should you have any questions please do not hesitate to contact me.

Yours sincerely,

Redacted

Stefany Alves Veronese
Assistant Safeguarding Manager

National Air Traffic Services (NATS)

Prepared by:
NATS Safeguarding Office

Technical and Operational Assessment (TOPA)

For SG38305 MachairWind (ScotWind W1) Wind Farm Development

NATS ref: SG38305

Scottish Government ref: SCOP0057

Issue 1

Contents

Publication History

Issue	Month/Year	Change Requests and summary
1	November 2024	Scoping Request

Document Use

External use: Yes

Referenced Documents

1. Background

1.1. En-route Consultation

NATS en-route plc is responsible for the safe and expeditious movement in the en-route phase of flight for aircraft operating in controlled airspace in the UK. To undertake this responsibility it has a comprehensive infrastructure of RADAR's, communication systems and navigational aids throughout the UK, all of which could be compromised by the establishment of a wind farm.

In this respect NATS is responsible for safeguarding this infrastructure to ensure its integrity to provide the required services to Air Traffic Control (ATC).

In order to discharge this responsibility NATS is a statutory consultee for all wind farm applications, and as such assesses the potential impact of every proposed development in the UK.

The technical assessment sections of this document define the assessments carried out against the development proposed in section 3.

2. Scope

This report provides NATS En-Route plc's view on the proposed application in respect of the impact upon its own operations and in respect of the application details contained within this report.

Where an impact is also anticipated on users of a shared asset (e.g. a NATS RADAR used by airports or other customers), additional relevant information may be included for information only. While an endeavour is made to give an insight in respect of any impact on other aviation stakeholders, it should be noted that this is outside of NATS' statutory obligations and that any engagement in respect of planning objections or mitigation should be had with the relevant stakeholder, although NATS as the asset owner may assist where possible.

3. Application Details

Scottish Government submitted a request for a NATS technical and operational assessment (TOPA) for the development at MachairWind (ScotWind W1) Wind Farm. It will comprise turbines as detailed in Table 1 and contained within an area as shown in the diagrams contained in Appendix B.

Turbine	Lat	Long	East	North	Tip Height (m)
1	55.9197	-6.4853	119879	678715	340
2	56.1029	-6.4495	123426	698939	340
3	56.1739	-6.6751	109948	707760	340
4	56.0886	-6.9559	91853	699504	340
5	55.8126	-6.6950	105980	667686	340
6	55.8186	-6.6834	106752	668298	340

Table 1 – Turbine Details

4. Assessments Required

The proposed development falls within the assessment area of the following systems:

En-route Surv	Lat	Long	nm	km	Az (deg)	Type
Great Dun Fell Radar	54.6841	-2.4509	157.0	290.7	300.2	CMB
Lowther Hill Radar	55.3778	-3.7530	98.4	182.3	291.5	CMB
Perwinnes Radar	57.2123	-2.1309	157.8	292.2	245.8	CMB
Tiree Radar	56.4556	-6.9230	18.9	34.9	162.0	CMB
En-route Nav	**Lat**	**Long**	**nm**	**km**	**Az (deg)**	**Type**
None						
En-route AGA	**Lat**	**Long**	**nm**	**km**	**Az (deg)**	**Type**
None						

Table 2 – Impacted Infrastructure

4.1. En-route RADAR Technical Assessment

4.1.1. Predicted Impact on Tiree RADAR

Using the theory as described in Appendix A and development specific propagation profile it has been determined that the terrain screening available will not adequately attenuate the signal, and therefore this development is likely to cause false primary plots to be generated. A reduction in the RADAR's probability of detection, for real aircraft, is also anticipated.

4.1.2. En-route operational assessment of RADAR impact

Where an assessment reveals a technical impact on a specific NATS' RADAR, the users of that RADAR are consulted to ascertain whether the anticipated impact is acceptable to their operations or not.

Unit or role	Comment
Prestwick Centre ATC	Unacceptable
Military ATC	Acceptable

Note: The technical impact, as detailed above, has also been passed to non-NATS users of the affected RADAR, this may have included other planning consultees such as the MOD or other airports. Should these users consider the impact to be unacceptable it is expected that they will contact the planning authority directly to raise their concerns.

4.2. En-route Navigational Aid Assessment

4.2.1. Predicted Impact on Navigation Aids

No impact is anticipated on NATS' navigation aids.

4.3. En-route Radio Communication Assessment

4.3.1. Predicted Impact on the Radio Communications Infrastructure

No impact is anticipated on NATS' radio communications infrastructure.

5. Conclusions

5.1. En-route Consultation

The proposed development has been examined by technical and operational safeguarding teams. A technical impact is anticipated, this has been deemed to be unacceptable.

Appendix A – Background RADAR Theory

Primary RADAR False Plots

When RADAR transmits a pulse of energy with a power of P_t the power density, P, at a range of r is given by the equation:

$$P = \frac{G_t P_t}{4\pi r^2}$$

Where G_t is the gain of the RADAR's antenna in the direction in question.

If an object at this point in space has a RADAR cross section of σ, this can be treated as if the object re-radiates the pulse with a gain of σ and therefore the power density of the reflected signal at the RADAR is given by the equation:

$$P_a = \frac{\sigma P}{4\pi r^2} = \frac{\sigma G_t P_t}{(4\pi)^2 r^4}$$

The RADAR's ability to collect this power and feed it to its receiver is a function of its antenna's effective area, A_e, and is given by the equation:

$$P_r = P_a A_e = \frac{P_a G_r \lambda^2}{4\pi} = \frac{\sigma G_t G_r \lambda^2 P_t}{(4\pi)^3 r^4}$$

Where G_t is the RADAR antenna's receive gain in the direction of the object and λ is the RADAR's wavelength.

In a real world environment this equation must be augmented to include losses due to a variety of factors both internal to the RADAR system as well as external losses due to terrain and atmospheric absorption.

For simplicity these losses are generally combined in a single variable L.

$$P_r = \frac{\sigma G_t G_r \lambda^2 P_t}{(4\pi)^3 r^4 L}$$

Secondary RADAR Reflections

When modelling the impact on SSR the probability that an indirect signal reflected from a wind turbine has the signal strength to be confused for a real interrogation or reply can determined from a similar equation:

$$P_r = \frac{\sigma G_t G_r \lambda^2 P_t}{(4\pi)^3 r_t^2 r_r^2 L}$$

Where r_t and r_r are the range from RADAR-to-turbine and turbine-to-aircraft respectively. This equation can be rearranged to give the radius from the turbine within which an aircraft must be for reflections to become a problem.

$$r_r = \sqrt{\frac{\lambda^2}{(4\pi)^3}} \sqrt{\frac{\sigma G_t G_r P_t}{r_t^2 P_r L}}$$

Shadowing

When turbines lie directly between a RADAR and an aircraft not only do they have the potential to absorb or deflect, enough power such that the signal is of insufficient level to be detected on arrival.

It is also possible that azimuth determination, whether this done via sliding window or monopulse, can be distorted giving rise to inaccurate position reporting.

Terrain and Propagation Modelling

All terrain and propagation modelling is carried out by a software tool called ICS Telecom (version 11.1.7). All calculations of propagation losses are carried out with ICS Telecom configured to use the ITU-R 526 propagation model.

Appendix B – Diagrams

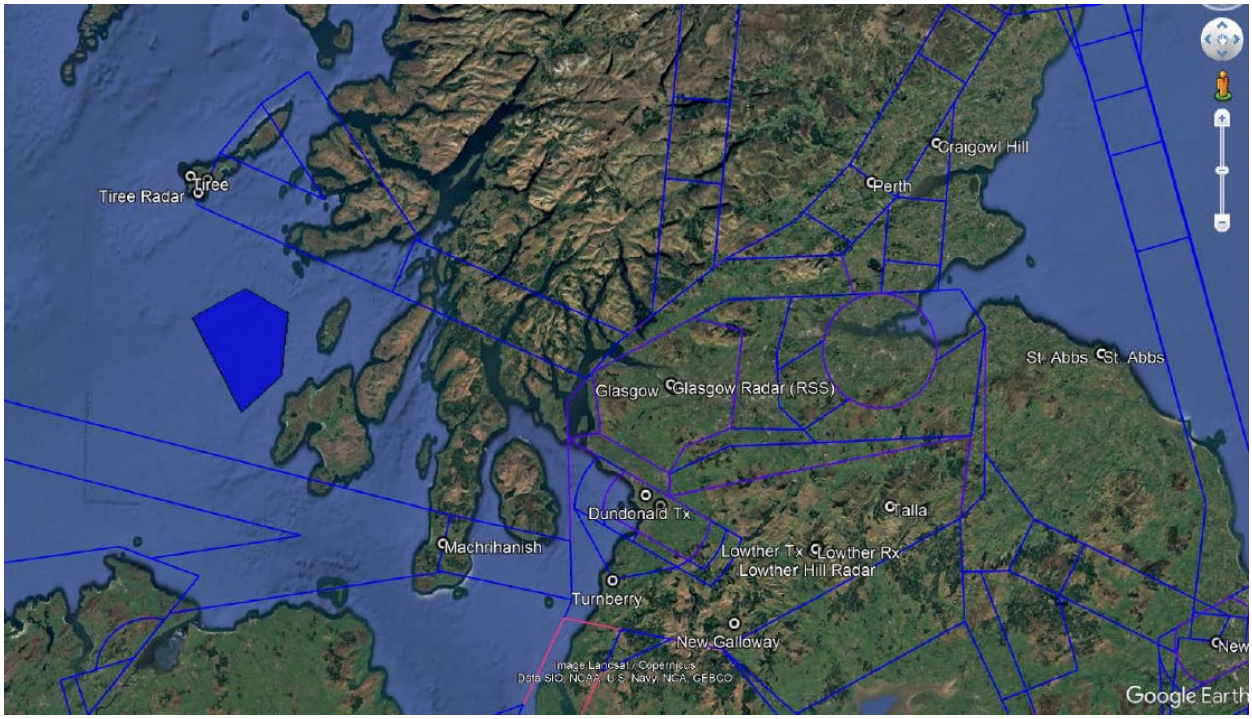


Figure 1: Proposed development location shown on an airways chart

Northern Lighthouse Board (NLB)

Northern Lighthouse Board

84 George Street
Edinburgh EH2 3DA

Tel: 0131 473 3100
Fax: 0131 220 2093

Website: www.nlb.org.uk
Email: enquiries@nlb.org.uk

Your Ref: SCOP-0057 – MachairWind OWF – Scoping Report
Our Ref: AL/OPS/ML/WIND_069_24

Ms Abby Gray
Licensing Operations Team – Marine Directorate
Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

4 November 2024

REGULATION 14 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017; REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 (collectively referred to as the "EIA Regulations")

ScottishPower Renewables – MachairWind Offshore Windfarm – ScotWind W1 Site, Located off the West Coast of Scotland, Northwest of Islay and West of Colonsay

Thank you for your e-mail correspondence dated 17th and 25th October 2024 relating to the Scoping Report submitted by **ScottishPower Renewables** for the proposed development of the MachairWind Offshore Windfarm, located off the west coast of Scotland, northwest of Islay and west of Colonsay.

It is noted that the project will consist of a maximum of 147 Wind Turbine Generators (WTG) utilising fixed foundations, with an anticipated capacity of around 2 Gigawatts (GW). Offshore Substation Platforms (OSP) and export cables will be considered within a separate application covering Offshore Transmission Infrastructure.

Northern Lighthouse Board acknowledge the inclusion of Chapter 13 – Shipping and Navigation within the report, and welcome the commitment to develop Post-Consent documentation including a Lighting and Marking Plan (LMP), Development Specification and Layout Plan (DSLP) and a Navigational Safety Plan (NSP) as embedded mitigations across all phases of the project. NLB Navigation Department will continue to engage with the developer with regard to these documents.

NLB also welcome the inclusion of Section 13.10 (Potential Cumulative Effects) and 13.11 (Potential Transboundary Effects) within the Shipping & Navigation chapter.

Northern Lighthouse Board note the inclusion of Dubh Artach Lighthouse as a key receptor in a number of other sections within the report, including Chapter 14 (Offshore Archaeology & Cultural Heritage) and Chapter 15 (Military & Civil Aviation). These acknowledge both the historic nature of the NLB lighthouse, and also an ongoing operational requirement to maintain and operate it as an Aid to Navigation that is considered critical to the safety of navigation in the area. NLB welcome the intention to include these impacts within the EIA document.

In short Northern Lighthouse Board's contract aircraft operate to Dubh Artach all year round subject to weather conditions. Approaches and departures occur from all directions. Under slinging operations from our vessel NLV Pharos also are carried out with the vessel positioning relatively close to the lighthouse as best suits the wind and sea state at the time. Safe helicopter and vessel operating areas to facilitate these operations are required.

Northern Lighthouse Board are scheduled to conduct major refurbishment projects on both Dubh Artach lighthouse, and nearby Skerryvore lighthouse, from 2027 through until 2032, and these works will utilise a large number of helicopter flights and ship visits to this area. These operations may coincide with the construction phase of the MachairWind project, and the need to define the safe limits for aviation and vessel operations in this area for both projects should be considered at an early stage. NLB is willing to engage with the project to deconflict aviation and maritime operations should any overlap occur.

Yours sincerely
Redacted

Peter Douglas
Navigation Manager

Sports Scotland

From:	Redact
To:	MD Marine Renewables
Subject:	RE: Update: ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site - Scoping and HRA Consultation - Response due by Friday 15th November
Date:	31 October 2024 11:47:39
Attachments:	image001.png

Hello,

We have contacted RYAS in relation to the proposals. They've noted concerns that the potential visual impact of the development may discourage some recreational craft users from passing along the neighbouring coast. But that risks to navigation would be low.

We understand RYAS have been, and will continue to be, consulted by the applicant and support this ongoing engagement.

Thanks, Gillian

Gillian Kyle | Planner | **sport**scotland
Doges **|** Templeton on the Green **|** 62 Templeton Street **|** Glasgow **|** G40 1DA

[Redacted]

g.uk
My normal working days are Tuesday, Wednesday and Thursday.

Follow us on twitter and facebook
sportscotland – **the national agency for sport**
spòrsalba - am buidheann nàiseanta airson spòrs

Royal Yachting Association (RYA)

RYA SCOTLAND

Caledonia House
1 Redheughs Rigg
South Gyle
Edinburgh, EH12 9DQ

Tel: 0131 317 7388
www.ryascotland.org.uk

4 November 2024

Abby Gray
Marine Licensing and Consenting Casework Officer
Marine Directorate Licensing Operations Team
Scottish Government, Marine Laboratory,
375 Victoria Road,
Aberdeen,
AB11 9DB
MD.MarineRenewables@gov.scot

Dear Abby,

Machair Wind Offshore Windfarm - ScotWind W1 Site Scoping Request

I have read the relevant parts of the scoping report on behalf of RYA Scotland and have discussed it with my colleague in the Cruising Association. We responded to the application for the Argyll Array in 2010. It was nearer Tiree but was withdrawn due to the presence of basking sharks and the nature of the seabed. Clearly Shipping and Navigation should be scoped in to the EIA. RYA Scotland and the Cruising Association would both like to contribute to the Navigational Risk Assessment. I will contact my colleagues in RYA Northern Ireland but recommend that the developers also consult the Irish Cruising Club and Sail Ireland as many Irish boats pass through the area.

Shipping and Navigation
Q1 *Is the legislation, policy and guidance proposed for consideration as part of the EIA (notably including the NRA for shipping and navigation) suitable and sufficient?*
Yes.

Q2 *Is the Study Area defined, data sources considered, and proposed data sources to inform the NRA suitable and sufficient (noting that the requirements of MGN 654 have been applied in the proposed approach)?*
The area of the wind farm is appropriately defined. However, it would be normal to include the proposed export corridor route (s).

RYA SCOTLAND

Caledonia House
1 Redheughs Rigg
South Gyle
Edinburgh, EH12 9DQ

Tel: 0131 317 7388
www.ryascotland.org.uk

It will also be important to list the candidate locations for the shore base or bases. I am a little puzzled by the statement in 916 that 'No decisions have been made on the port locations where supply chain companies would operate from, however, a short list of locations may be available by the time the EIA is undertaken.' I would have thought that a list could be produced now as appropriate locations are rather few in number and some must have already been scoped out. Oban, for example, would be inappropriate due to the existing high levels of traffic and lack of appropriate wharfs. Campbeltown would perhaps be a possibility as would ports in Northern Ireland such as Derry/Londonderry. Due to the distances involved I imagine that there may need to be a base from which the infrastructure is transported and a nearer one for basing guard vessels and other small craft. It would be difficult to comment fully on the EIA without knowing which ports might be used. Table 13.6 notes 'Reduced access to local ports, harbours and marinas' as a potential impact but this cannot be evaluated without knowing which ports are to be used.

The data sources in relation to recreational craft movements are sufficient, bearing in mind that only about a quarter of recreational vessels passing through the wind farm site transmit an AIS signal. Note also the additional data sources mentioned in the answer to question 7.

During the Navigational Risk Assessment, RYA Scotland and the Cruising Association can provide explanations of the particular routes taken by recreational boats. The site is on the direct route from Ireland to the west of Mull, including Iona, and then on through the Passage of Tiree to the north or to the Western Isles. Going round the wind farm would add considerably to the length of the voyage. Smaller boats from the Clyde will tend to pass east of Islay and Colonsay to avoid the area proposed for the wind farm due to its reputation for rough seas.

Q3 *Is the methodology outlined for undertaking the risk assessment suitable, including on a cumulative level?*
Yes.

RYA SCOTLAND

Caledonia House
1 Redheughs Rigg
South Gyle
Edinburgh, EH12 9DQ

Tel: 0131 317 7388
www.ryascotland.org.uk

Q4 *Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on shipping and navigation receptors?* Yes.

Q5 *Have all potential hazards (impacts) due to the presence of the WDA been identified for shipping and navigation users?*
No.

1) Failure of Aids to Navigation marking the devices is another hazard. There have been several cases where lights or AIS transmissions have failed on wind farms off the east coast of Scotland and it has often taken many days to replace them due to adverse weather. Mitigation might include the temporary use of virtual AtoNs. There have also been several cases of metocean and other buoys losing station. The location of the shore base from which repairs can be carried out is relevant.
2) It is possible that from the deck of a recreational vessel (c.2m above sea level) the Dubh Artach light may be obscured or at least confused with other lights on the wind farm.
3) If the export cable goes to South Ayrshire, as is proposed, then there will be additional hazards. Although cable laying is not normally an issue for recreational boaters, the busy area off the Mull of Kintyre is characterised by strong currents and there is a Traffic Separation Scheme not far offshore, which recreational boaters need to avoid.

Q6 *Are the mitigation measures described suitable and sufficient for managing and mitigating risk associated with the potential hazards?*
Yes, except for the issues described in the answer to question 5. Once the plan is approved, it is essential that the Clyde Cruising Club (sailingdirections@Clyde.org) is informed so that an amendment can be issued to the relevant volume of their Sailing Directions and Anchorages. If there is to be cable laying around the Mull of Kintyre then mitigation might include working with Scottish Canals to encourage greater use being made of the Crinan Canal for the duration of the works.

RYA SCOTLAND

Caledonia House
1 Redheughs Rigg
South Gyle
Edinburgh, EH12 9DQ

Tel: 0131 317 7388
www.ryascotland.org.uk

Q7 *Do you have any other matters or information sources that you wish to be presented in the EIAR?*
The writers of the EIA may find it useful to refer to the Firth of Clyde volume of the Clyde Cruising Club Sailing Directions and Anchorages as this includes Northern Ireland. The proposed wind farm site is covered in the Kintyre to Ardnamurchan volume.

The maps of the 2015 Marine Recreation and Tourism Survey are available on NMPi. These are probably an underestimate of the current amount of recreational traffic given the encouragement to sail in these waters given by, for example , the MalinWaters project.

Alan Stevenson's (1848) *Account of the Skerryvore Lighthouse: with notes on the illumination of lighthouses* is worth reading to provide background on the conditions experienced in that area. The climate has changed since Skerryvore Lighthouse was built with a likely increase in storminess. There is a fetch of many thousands of kilometres to the south west so the site is very exposed. In RYA Scotland we have been considering the implications of changes in storminess and wind patterns on recreational sailing. It is even more important that developments such as the present one take account of the best estimates of future climate during the lifetime of the project.

Seascape, Landscape and Visual Impacts
RYA Scotland normally restricts its comments on Scoping Requests to safety of navigation. However, as a key driver for marine tourism in this area is thought to be the apparent unspoiled nature of the seas and coasts, the impact on landscape and seascape for cruising sailors should be considered, bearing in mind that the height of eye of an observer on a typical cruising yacht is about 2 metres above sea level. Fig. 16.1 suggests that, in conditions of good visibility, the wind farm will be obvious to anyone sailing west of Islay or near Colonsay and Iona, for example. There are actually very few anchorages with a view that would include the wind farm site and the sites mentioned in Fig. 16.1 provide a good coverage. The view from St Columba's Bay is rather important.

RYA SCOTLAND

Caledonia House
1 Redheughs Rigg
South Gyle
Edinburgh, EH12 9DQ

Tel: 0131 317 7388
www.ryascotland.org.uk

Socio-economics

We welcome the scoping in of tourism and shipping and marine recreation. Reference should be made to *Giant Strides 2020-2025*, Scotland's second marine tourism strategy. This is available to download from the website of the Scottish Tourism Alliance. The Sail Scotland website also contains considerable useful information. Publicity encouraging people to visit these waters often mentions the seascapes and the perceived unspoiledness of the area. It is unclear how many visitors by sea would be discouraged by the presence of this wind farm and this should be investigated. Note that in sailing terms the impact on Northern Ireland and the north-west of the Republic of Ireland also need to be considered so these potential trans-boundary effects should be scoped in.

Climate change

Most recreational boaters on the west coast are acutely aware of our changing marine climate. Winter has always been testing but summer and early autumn conditions seem to be getting worse although this is not always captured in published Meteorological Office data as gust speed, predictability of poor sailing conditions and interactions between wind speed and wave form are all important. Adaptation to climate change, including passage planning, is something that RYA Scotland is considering. In relation to this project a key issue for us is the risk of storm damage to Aids to Navigation and the rapidity with which deficiencies can be made good. The CEFAS Blackstones Buoy, which has been located at 56° 03' 43" N, 007° 03' 24" W since 2009, is a useful source of wave data which can perhaps be used to extrapolate in time metocean data collected at the Machair site.

Yours sincerely,

Redacted

Dr G. Russell FCIEEM(retd) FRMetS
Planning and Environment Officer, RYA Scotland

Scottish Water

Tuesday, 22 October 2024

Marine Licensing
375 Victoria Road

Aberdeen

Development Operations
The Bridge
Buchanan Gate Business Park
Cumbernauld Road
Stepps
Glasgow
G33 6FB

Development Operations
Freephone Number - 0800 3890379
E-Mail - DevelopmentOperations@scottishwater.co.uk
www.scottishwater.co.uk

Follow Us

Dear Customer,

MachairWind Offshore Windfarm, Northwest of Islay, West of Colonsay, PA67 6DR
Planning Ref: SCOP0057
Our Ref: DSCAS-0120014-XSV
Proposal: Environmental Impact Assessment

Please quote our reference in all future correspondence

Audit of Proposal

Scottish Water has no objection to this proposal. Please read the following carefully as there may be further action required. Scottish Water would advise the following:

Drinking Water Protected Areas

A review of our records indicates that there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed activity.

Surface Water

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.

There may be limited exceptional circumstances where we would allow such a connection for brownfield sites only, however this will require significant justification from the customer taking account of various factors including legal, physical, and technical challenges.

In order to avoid costs and delays where a surface water discharge to our combined sewer system is anticipated, the developer should refer to our guides which can be found at https://www.scottishwater.co.uk/Help-and-Resources/Document-Hub/Business-and-Developers/Connecting-to-Our-Network which detail our policy and processes to support the application process, evidence to support the intended drainage plan should be submitted at the technical application stage where we will assess this evidence in a robust manner and provide a decision that reflects the best option from environmental and customer perspectives.

Next Steps:

All developments that propose a connection to the public water or waste water infrastructure are required to submit a Pre-Development Enquiry (PDE) Form via our Customer Portal prior to any formal technical application being submitted, allowing us to fully appraise the proposals

I trust the above is acceptable however if you require any further information regarding this matter please contact me on **0800 389 0379** or via the e-mail address below or at planningconsultations@scottishwater.co.uk.

Yours sincerely,

Ruth Kerr
Development Services Analyst
PlanningConsultations@scottishwater.co.uk

Scottish Water Disclaimer:

"It is important to note that the information on any such plan provided on Scottish Water's infrastructure, is for indicative purposes only and its accuracy cannot be relied upon. When the exact location and the nature of the infrastructure on the plan is a material requirement then you should undertake an appropriate site investigation to confirm its actual position in the ground and to determine if it is suitable for its intended purpose. By using the plan you agree that Scottish Water will not be liable for any loss, damage or costs caused by relying upon it or from carrying out any such site investigation."

Supplementary Guidance

- Scottish Water asset plans can be obtained from our appointed asset plan providers:
    - Site Investigation Services (UK) Ltd
    - Tel: 0333 123 1223
    - Email: sw@sisplan.co.uk
    - www.sisplan.co.uk
- Scottish Water's current minimum level of service for water pressure is 1.0 bar or 10m head at the customer's boundary internal outlet. Any property which cannot be adequately serviced from the available pressure may require private

pumping arrangements to be installed, subject to compliance with Water Byelaws. If the developer wishes to enquire about Scottish Water's procedure for checking the water pressure in the area, then they should write to the Development Operations department at the above address.

- If a connection to the public sewer and/or water main requires to be laid through land out-with public ownership, the developer must provide evidence of formal approval from the affected landowner(s) by way of a deed of servitude.

- Scottish Water may only vest new water or waste water infrastructure which is to be laid through land out with public ownership where a Deed of Servitude has been obtained in our favour by the developer.

- The developer should also be aware that Scottish Water requires land title to the area of land where a pumping station and/or a Sustainable Drainage System (SUDS) proposed to vest in Scottish Water is constructed.

- Please find information on how to submit application to Scottish Water at our Customer Portal.

Clyde Fish Association

From:	Redacte
To:	MD Marine Renewables
Cc:	Abby Gray; John Mckay; Ben Walker
Subject:	Re: Reminder: ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site - Scoping and HRA Consultation - Response due by Friday 22nd November
Date:	22 November 2024 15:55:45
Attachments:	image001.png

Dear All,

Having read the documentation we would make the following points on behalf of our members:

Having experience on working on cable projects on the West Coast and Renewables on the East Coast of Scotland we note that the plans of the developers (in the case of Machair, Scottish Power) often make strong efforts to engage with stakeholders in good faith from the outset. However we would also note that common issues start to occur when contractors come in to complete the work and there can be deviations from the originally proposed plans and routes, this is when issues for local fishing fleets present generally. We would urge strong communication throughout the project, particularly if there should be any changes. We note that in the past emergency licences have been used at short notice by contractors on the grounds of safety, but indeed this can lead to safety issues for local fishermen if this is not communicated effectively or if local fishing boats activity is not fully considered.

We note the socio-economic impact doesn't detail too strongly on impacts to fishing which could be negative, not only from the Machair site itself but particularly from the cable routes. The cable routes are likely to impact on very valuable scallop, prawn, lobster, finfish and crab ground, and we would note this should be fully considered and mitigated and where appropriate compensated if impact is significant. We would stress that all fishing gear types should be engaged with fairly (mobile/static etc), particularly if displacement occurs to any gear type which is damaging. In the past we have seen individual fishermen approached whilst others have not been and this has caused significant issues between fishermen. These issues happened with other companies, but we are aware of the issues this can cause. Fishing is a community most likely to be impacted by the site and the cables and so we feel this must be fairly reflected as the project develops.

We should also stress that in some cases where fishing might be possible in some respects in relation to renewable sites, it is often the case that vessel insurance and safety aspects would not be covered, so more fishing ground may in practice be lost than is reflected in theory.

We are also aware of EMF work ongoing regarding renewable sites and cabling and would stress any research should be considered as it evolves

We have relayed to Machair team that we are keen to work with them on cable routes and the burial routes, we have already fed in and we would welcome practical involvement as the project moves forward to minimise impacts to fisheries and push on coexistence, for example observers onboard to help advise on routes, minalise rockdump and mattressing giving a preference to mud burial. We note that any cable protection which presents a risk to safe fishing will be an issue for local fishermen and should be avoided.

Many thanks,

Elaine

.Many thanks,

Elaine

Highlands and Islands Airports Limited (HIAL)

From:	Safeguarding
To:	MD Marine Renewables
Cc:	Abby Gray; John Mckay; Ben Walker; Safeguarding
Subject:	RE: Reminder: ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site - Scoping and HRA Consultation - Response due by Friday 22nd November
Date:	19 November 2024 16:05:08
Attachments:	image001.png

OFFICIAL

REGULATION 14 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
(collectively referred to as the "EIA Regulations").

ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site, located off the west coast of Scotland, northwest of Islay and west of Colonsay.

We have reviewed the above application, and the proposed development location sits within the Minimum Sector Altitude (MSA) for Islay and Tiree Airport, therefore it may conflict with our Instrument Flight Procedures. We would need the exact co-ordinates (Eastings and Northerings) and height for each wind turbine to carry out an accurate initial Safeguarding Assessment. Please note, that we would also require aviation lighting on each of the turbines (for further information please refer to Advice Note 2 'Lighting' (available at http://www.aoa.org.uk/policy-campaigns/operations-safety). Please also consider the lighting requirements as documented in The Air Navigation Order 2016, Article 222) and a construction management strategy. This should include details of the construction of wind turbines onshore and a turbine route map from onshore to the offshore location.

Kind regards,

Nyree

Nyree Millar-Bell
Aerodrome Safeguarding and Operations Support Officer
Highlands and Islands Airports Limited

From: Info <info@hial.co.uk>
Sent: Friday, November 15, 2024 10:48 AM
To: Safeguarding <Safeguarding@hial.co.uk>
Subject: Fw: Reminder: ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site - Scoping and HRA Consultation - Response due by Friday 22nd November

OFFICIAL

Good morning,

Just passing this on.

Iona Community Council

From:	Redacted
To:	MD Marine Renewables
Cc:	Abby Gray; John Mckay; Ben Walker; iona-community-council
Subject:	Re: Reminder: ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site - Scoping and HRA Consultation - Response due by Friday 22nd November
Date:	22 November 2024 13:34:20

Following is a response from Iona Community Council:

The scoping report needs to:

Make clear the chain of ownership and financial benefits of a marine development of this scale - it may be stated somewhere in the 550 page Scoping Report but if there we suggest it needs to be much more upfront. Our understanding from a session on Iona is that the ownership is Danish. An analysis of positive and negative benefits needs to be transparent and disaggregated on the multinational ownership structure, comparative flow and amounts of financial benefits/ anticipated returns, within and outside Scotland/ UK - to owners, Crown Estate via lease, island communities etc.

Present a clear, comparative, quantified account of *all* benefits (precise amounts/ locations of jobs, GVA etc), including financial, to all parties - development owner, land owner, island communities etc.

Present more clearly and upfront the routes and impacts of substations and battery storage required to store and send this power south.

Rather than treating such a large scale development in isolation, set the context of how many other renewables schemes are operating and/ or struggling to secure the necessary governmental support to progress within the area of this Scoping Report - particularly community-led renewables, whether these are being enabled as part of the 'vision' for the Highlands and Islands, whether vast scale transnational projects are displacing small-scale projects that have a genuinely circular economy of profits and benefits to the local community. In a climate emergency vast scale developments will have a place but they appropriateness and value cannot be assessed in isolation.

Under the socio-economic section, include crofting.

with best wishes - Shiona Ruhemann, Iona Community Council

North Ayrshire Council

From:	Thom Ledingham (Planning Officer / Planning)
To:	MD Marine Renewables
Subject:	RE: ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site - Scoping and HRA Consultation - Response due by Friday 15th November
Date:	23 October 2024 12:13:36
Attachments:	image001.png

Dear Abby Gray,

REGULATION 14 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
(collectively referred to as the "EIA Regulations").

ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site, located off the west coast of Scotland, northwest of Islay and west of Colonsay.

Thank you for contacting North Ayrshire Council regarding the above. I can confirm that from a Planning Service perspective, the Council has no comments to make. It is noted that the South Arran Nature Conservation Marine Protection Area was considered to be part of the assessment but has been "screened out". This is considered to be a reasonable approach given the distance to the proposal and the nature of the protected features of the designation.

Please note that this is an Officer response made on behalf of the Council and will not prejudice any future decision to be made (if required) by the Council. Should any of the above raise any questions or comments, please do not hesitate to get in touch.

Kind regards,

Thom Ledingham
Planning Officer (Strategic Planning)

Planning Services | Communities & Housing | North Ayrshire Council
Cunninghame House, Irvine KA12 8EE

e-mail: thomledingham@north-ayrshire.gov.uk
telephone: 01294 324 62 [Redacted]

If you would like to view or comment on a planning application, please go to www.eplanning.north-ayrshire.gov.uk

The Council has now started the process of updating our Local Development Plan. For more information on the upcoming plan or how to get involved, click on the image below or scan the QR code using a mobile device.

BT

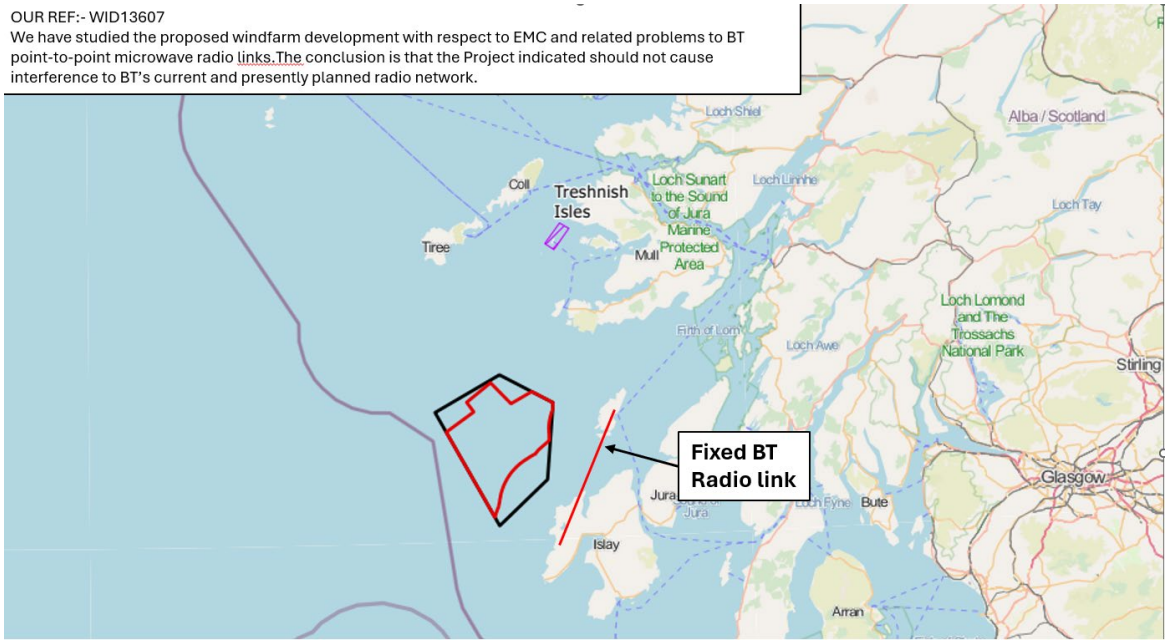
From:	radionetworkprotection@bt.com
To:	MD Marine Renewables
Cc:	Ben Walker; John Mckay; Abby Gray; Marc MacFarlane
Subject:	ScottishPower Renewables - MachairWind Offshore Windfarm - ScotWind W1 Site - Scoping and HRA Consultation - Response due by Friday 15th November WID13607
Date:	18 October 2024 10:18:26
Attachments:	image002.png image003.png image004.png

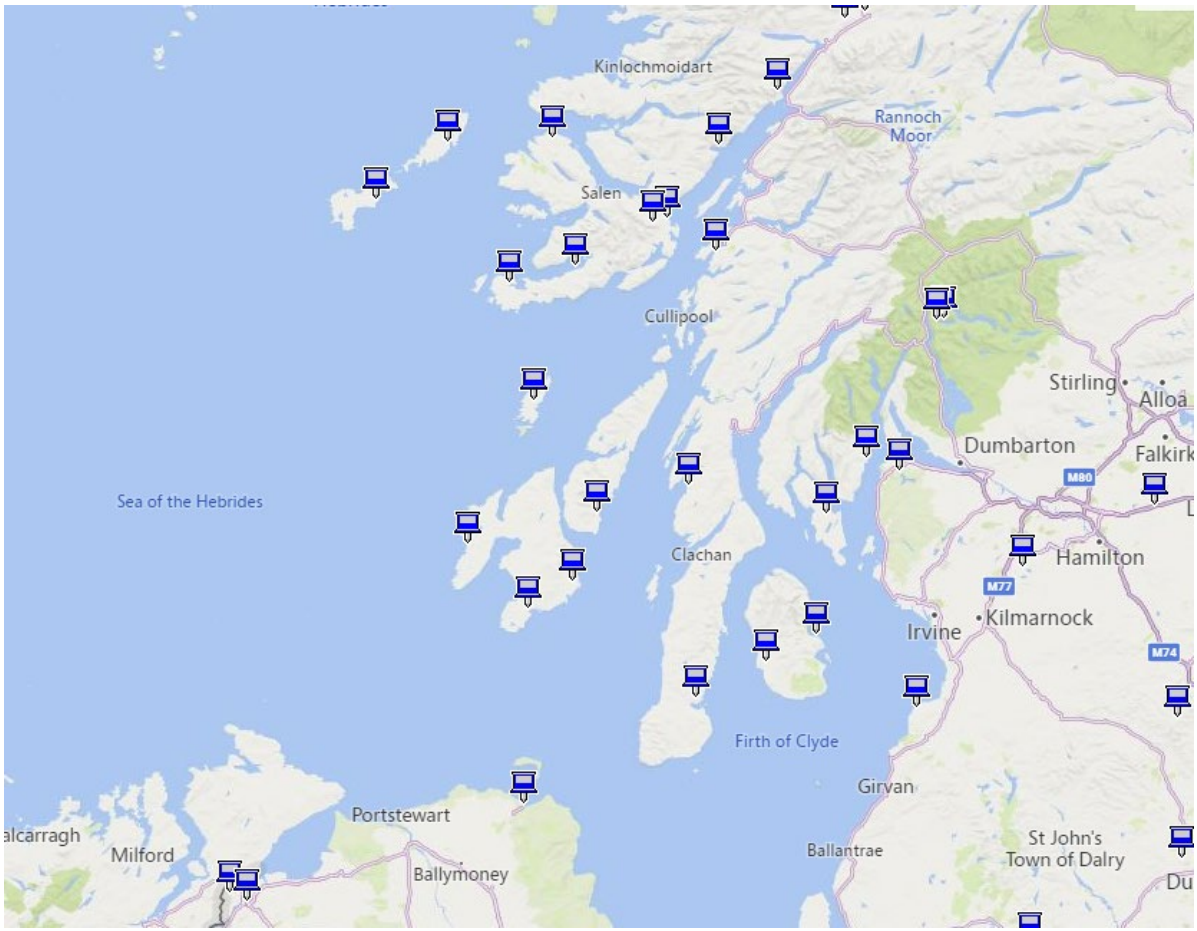
OUR REF:- WID13607

Good morning Abby
Thank you for your email dated 17/10/2024.

We have studied the proposed offshore windfarm development with respect to EMC and related problems to BT point-to-point microwave radio links.
The conclusion is that the Project indicated should not cause interference to BT's current and presently planned radio network.

Kind Regards
Chris




Kinlochmoidart
Rannoch Moor
Salen
Cullipool
Stirling
Alloa
Dumbarton
Falkirk
M80
Sea of the Hebrides
Clachan
Hamilton
M77
Irvine
Kilmarnock
M74
Firth of Clyde
Girvan
Portstewart
Milford
Ballymoney
Ballantrae
St John's Town of Dalry