East Lothian Council

Our ref: CONS/GOV/2023 Ossian Scoping

Your Ref: none given

Date: 31 MARCH 2023

Monica Patterson
EXECUTIVE DIRECTOR
(SERVICES FOR
COMMUNITIES)

John Muir House
Haddington
East Lothian
EH41 3HA
Tel 01620 827827
Fax 01620 824295

Sent via email to ms.marinerenewables@gov.scot

Dear Sirs/Madan

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REGULATION 13 AND SCHEDULE 4 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2007
(collectively referred to as the "EIA Regulations")

I refer to your request of 16 March 2023 for the comments of this Council on items to be included in the Scoping Opinion for the proposed Ossian Offshore Wind Farm Limited, 80km SE from the Aberdeenshire coast.

Please find our comments annexed below. They are given without prejudice to any comments or position the Council may take on any application that is made in relation to this proposal, under the Electricity Act or otherwise.

If you would like to discuss the contents of this response, please contact in the first instance J Squires via email at jsquires@eastlothian.gov.uk .

Yours sincerely,

Redacted

Keith Dingwall
Planning Service Manager
Development
Communities

Ossian Windfarm– Scoping Response

1. The Scoping Report covers the wind farm array. The Rochdale Envelope approach is used. The array is to consist of a maximum design or 270 wind turbines, 399 m above LAT to tip, 224m above LAT to hub, and with a maximum rotor diameter of 350m. The Report also covers array infrastructure including floating foundations, offshore substation platforms, cables connecting the turbines to the offshore substation platforms and to each other, as well as scour protection and cable protection.

Description of the development

2. The Scoping Report does not cover proposed offshore export cable corridor(s), proposed onshore export cable corridor(s), including the onshore substation at the proposed landfall location. The Scoping Report states this will be subject to a separate EIA Scoping Report and associated EIA Report which will be produced in future once relevant information is available following conclusion of the ongoing Offshore Transmission Network Review (OTNR) and National Grid Holistic Network Design Follow Up Exercise (HNDFUE) review.
3. The Council considers the means of connection to the grid to be an essential part of the development, as without this the electricity cannot be exported or used. They are therefore part of the whole project and information on this should be included in the EIAR, or if this is not possible, a clear indication of where this can be found.
4. Regulation 3 of the EIA Regulations provides that "Scottish Ministers must not grant an Electricity Act consent for EIA development; or direct that planning permission is deemed to be granted…unless an environmental impact assessment has been carried out in respect of that development ….". EIA development is defined as including Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location". We assume that the applicant considers there will be such an effect by seeking a Scoping Opinion.
5. The provisions implemented article 1(1) of the Environmental Impact Assessment Directive 2011/92/EU, which requires the effects of the 'project' to be assessed, and the reference to 'the development' was intended to give effect to this. The term 'project' is to be understood broadly. The objectives of the Directive and therefore these regulations should not be circumvented by dividing what is in reality a single project into separate parts, referred to as 'salami slicing'. Notwithstanding that the applicant intends to apply for consent separately, the grid connection is an essential part of the project and must in our view be taken into account in assessing the effects of the development. We are not convinced it is appropriate to consider the effects of the offshore array and offshore and onshore export corridors and substations cumulatively, when in reality they are part of the same project.

Decommissioning

6. We welcome the statement in paragraph 124 that the EIA Report will provide an overview of anticipated decommissioning events and assessment of the potential significant effects of this phase on receptors. The array is some distance from East Lothian though as the location of the landfall and export corridors are not given, our area could be directly affected by the project as a whole. The Scoping Report states that developers of offshore renewable energy projects are required to prepare a Decommissioning Programme for approval by Scottish Ministers, and a detailed plan for decommissioning post consent. It seems to us desirable that the

decommissioning programme should be sufficiently detailed that it is clear how the project could be removed and what wastes will arise. This will help avoid issues appearing at decommissioning which could be avoided through design now.

Approach to significance

7. The Scoping Report states (para 187) that "effects will be assessed as 'significant' or 'non-significant'. A significant effect is defined as a level of effect of equal to or greater than 'moderate'. A non-significant effect is considered as a level of effect of 'minor' or less. In the decision-making process, effects of moderate significance or above are considered important, whereas effects of minor significance or less are considered to have little, if any, importance". Table 4.1 combines sensitivity of receptor with magnitude of impact to give the level of impact. A Low magnitude impact on a High sensitivity receptor is described as 'minor to moderate'. It is not clear how this will be treated, and we assume it will be decided if the effect is minor or moderate using professional judgement.

Population and human health

8. The Scoping Report considers impacts on fishing. Fish is a healthy food that is becoming increasingly expensive which effects lower income people especially. If there are significant effects on fishing interests, including cumulatively, there presumably could be an impact on the price and availability of fish, which could affect human health.
9. The Scoping Report does not say if there is any potential for contaminants from the windfarm to enter the human food chain.

Noise

10. No information is given about helicopter routes. Helicopter flight could potentially bring noise and air quality effects, and if a significant increase in flights over East Lothian is anticipated, assessment of noise and potentially air quality should be considered.

Biodiversity

11. The Council values its bird life including that of the Forth Islands and Firth of Forth SPAs, as well as the marine mammals that visit our shores. We note there is potential for collision, barrier and displacement impacts to some of the qualifying interests. We note that the effects of climate change on future bird feeding resources does not appear to have been considered at this stage and ask if it should be. We are unsure if there could be effects of the proposal on the marine food chain which could then affect our birds, which doesn't appear to have been included. We defer to the expertise of NatureScot in this however.

Landscape

12. It does not appear that the proposal will be visible from East Lothian, other than possibly in elevated positions. This might include North Berwick Law, a popular viewpoint with excellent long distance views. From this point, it might appear as part of a view where offshore windfarms cumulatively have a significant influence on the view, though the contribution of this scheme, even if visible, would not be significant.
13. For clarity it would be useful to include a statement on whether or not the windfarm is visible from East Lothian.

Water

14. The proposals is at some distance from East Lothian and it is therefore unlikely that a water pollution event would affect our shores, or recreational users from our area. It could

potentially affect our birds though, and so we welcome the development to the Marine Pollution Contingency Plan as part of the designed in measures, which should help avoid and tackle water pollution incidents.

Climatic factors

15. The Scoping Report includes a section on climatic effects. We welcome the recognition that an overview is required of all parts of the project including the grid connection infrastructure. We support the inclusion of embodied carbon in construction materials. We would also suggest consideration of what happens to the parts after decommissioning (for example if they are recycled) which is not specifically mentioned in Table 5.12 but will have an impact on emissions overall. We agree that the potential for carbon displacement due to the provision of renewable energy should be included. We expect that this may change over the life of the project and some estimate of the change over time should be included.
16. The Climatic section does not include any information on whether local changes to weather or climate are expected, either of the project alone or cumulatively. If this could happen, especially if rainfall on land could increase or decrease, this should be included.

Northumberland County Council

Northumberland
County Council

Iain MacDonald
Marine Scotland - Marine Planning & Policy
Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Planning Ref: 23/00984/CNA
Your Ref:
Contact: Mr David Love
Direct Line: Redacted
E-Mail: David.love@northumberland.gov.uk
Date: 23rd March 2023

Dear Sir/Madam,

TOWN & COUNTRY PLANNING ACT 1990
Town and Country Planning (Development Management Procedure) (England) Order 2015

Proposal REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE.

Location Ossian Offshore Wind Farm 80km South-East From The Aberdeenshire Coastline

Applicant Iain MacDonald Marine Scotland - Marine Planning & Policy

I would confirm that Development Management have **No Objection** to the above consultation.

Yours Faithfully

Mr David Love
Planning Officer

Whale & Dolphin Conservation Society

From:	Vicki James
To:	MS Marine Renewables
Subject:	FW: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023
Date:	24 March 2023 09:23:20
Attachments:	image002.png image003.png image004.png image005.png image006.png image007.png image008.png image009.png

Dear Ian,

Thank you for your email below, I have been forwarded this as Fiona has recently left WDC and I'm helping out on offshore renewable responses until that role is recruited for.

We generally don't engage on individual developments, so please take this as a 'nil return' response.

Do let me know if you have any queries.

Best wishes.

Vicki

Vicki James
Green Whale research coordinator

Telephone: Redacted

WDC, Whale and Dolphin Conservation
Brookfield House
38 St. Paul Street
Chippenham
Wiltshire
SN15 1LJ
United Kingdom
whales.org

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: Thursday, March 16, 2023 12:39 PM
Subject: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023

Good Morning,

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SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline

In respect of the proposed marine licence application for the above works (under the Marine and Coastal Access Act 2009) and the section 36 consent application (under the Electricity Act 1989), Ossian Offshore Wind Farm Limited has requested the Scottish Ministers adopt a scoping opinion in relation to the above proposed works under the above EIA Regulations.

The scoping report submitted by the applicant can be found at: Scoping Report - Ossian Offshore Wind Farm | Marine Scotland Information

To assist the Scottish Ministers in adopting a comprehensive scoping opinion, which will outline the scope and level of detail of information to be provided in the Environmental Impact Assessment ("EIA") Report to be submitted by the applicant with its proposed section 36 consent and marine licence application, please review the scoping report and advise on what you consider should be included within or excluded from the scope of the EIA for the proposed works. In doing so you may wish to consider any comments you may have regarding data sources, proposed methodologies or the requirement for specific studies.

HABITATS REGULATIONS APPRAISAL SCREENING REPORT

In addition, Ossian Offshore Wind Farm Limited has submitted a Habitats Regulations Appraisal ("HRA") Screening Report. The HRA Screening Report provides information to enable the screening of the Ossian Offshore Wind Farm with respect to its potential to have a likely significant effect on European sites of nature conservation importance.

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We would appreciate any comments you may have on the HRA Screening Report and your opinion as to whether or not you are in agreement with the European sites identified.

Please submit your response electronically to ms.marinerenewables@gov.scot by Thursday 13th April 2023. If you are unable to meet this deadline, please contact us as soon as possible to discuss the possibility of an extension to the consultation period. If you have no comments to make please submit a "nil return" response.

Please be advised that this consultation request relates to the proposed section 36 consent and marine licence application for the array area only and not the export cable corridor or onshore elements of the works.

Yours faithfully,
Iain

Iain MacDonald
Marine Licensing & Consenting Casework Officer
Marine Scotland - Marine Planning & Policy

My working days are Monday to Thursday, generally 08:30-17:00

Please communicate with Marine Scotland - Licensing Operations Team (LOT) via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries. For any urgent queries please contact me via mobile.

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB
Email: Iain.Macdonald3@gov.scot
Mobile: Redacted
Website: http://www.gov.scot/Topics/marine/Licensing/marine

this e-mail may not necessarily reflect those of the Scottish Government.
****

BT
(Radio Network Protection Team)

From:	radionetworkprotection@bt.com
To:	MS Marine Renewables
Cc:	radionetworkprotection@bt.com
Subject:	RE: WID13046 - SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline-Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023
Date:	11 April 2023 16:25:10
Attachments:	image001.png image005.png

BT Group

OUR REF; WID13046

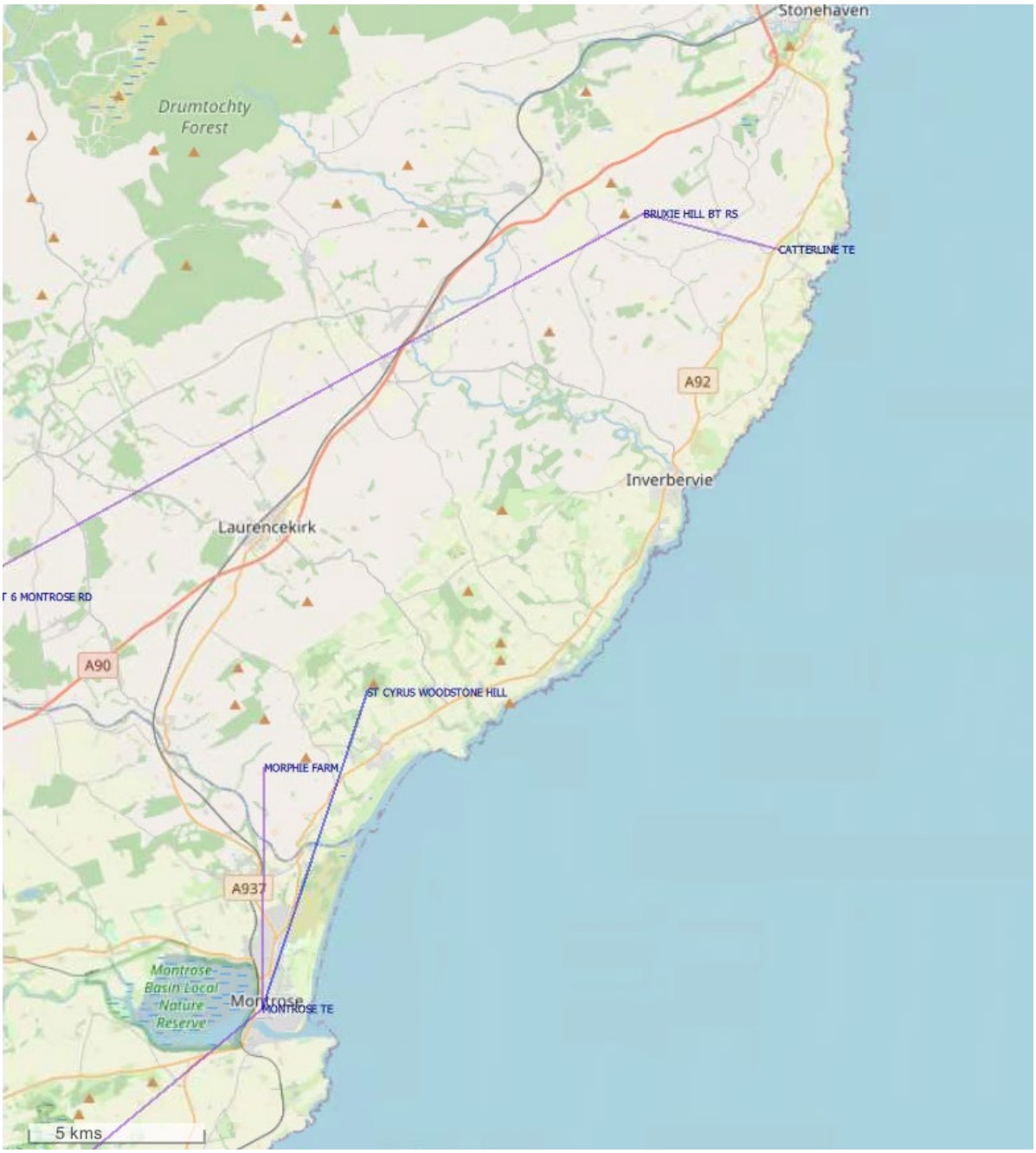
Thank you for your email dated 16/03/23.

We have studied this Ossian Offshore Wind Farm scoping proposal with respect to EMC and related problems to BT point-to-point microwave radio links.

The conclusion is that, the offshore site shown in ‘Figure 1.1 - Location of Site Boundary’ (attached) should not cause interference to BT’s current and presently planned radio network.

I have attached a screen shot which shows BTs current Radio Links in the vicinity as purple/blue lines on the Map. BT requires 100m minimum clearance from any structure to the radio link path. If there is any onshore element to this Windfarm or the proposed location of the offshore site boundary changes please let us know and we can reassess this for you.

Figure 1.1: Location of the Site Boundary Within Which the Array Will be Located



Please note this refers to BT Radio Links only, you will need to contact other providers separately for information relating to other supplier links / equipment.

Please direct all queries to radionetworkprotection@bt.com

Kind regards

Laura Taylor
National Radio Planner
Network Planning

E: radionetworkprotection@bt.com

BT Group

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 16 March 2023 12:39
Subject: WID13046 - SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023

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We would appreciate any comments you may have on the HRA Screening Report and your opinion as to whether or not you are in agreement with the European sites identified.

Please submit your response electronically to ms.marinerenewables@gov.scot by Thursday 13th April 2023. If you are unable to meet this deadline, please contact us as soon as possible to discuss the possibility of an extension to the consultation period. If you have no comments to make please submit a "nil return" response.

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Yours faithfully,
Iain

Iain MacDonald
Marine Licensing & Consenting Casework Officer
Marine Scotland - Marine Planning & Policy

My working days are Monday to Thursday, generally 08:30-17:00

Please communicate with Marine Scotland - Licensing Operations Team (LOT) via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries. For any urgent queries please contact me via mobile.

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB
Email: Iain.Macdonald3@gov.scot
Mobile: Redacted
Website: http://www.gov.scot/Topics/marine/Licensing/marine

Cruise Association

From:	Redacted
To:	MS Marine Renewables
Subject:	SCOP-0023 - Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm - Consultation response from the Cruising Association
Date:	11 April 2023 14:48:51

Thank you very much for inviting the Cruising Association to respond to this request for consultation on the Ossian Offshore Wind Farm. We appreciate the opportunity and look forward to being involved.

The Cruising Association represents the interests of recreational boaters in the UK and in many other places around the world. Our work differs from, but complements, the work of the RYA but we are entirely independent (www.theca.org.uk). I assume that the RYA is also being consulted.

Most or our members will own and/or sail in small cruising boats , both sail and power, generally with length overall of up to about 13.7 m (45 ft) although some will be larger. My comments therefore are related solely to what might be considered of relevance and interest to this type of vessel.

- The area chosen for the Ossian OWF is not in an area which has a high concentration of recreational boats so the array will not have a big impact either during construction or when operational. However, there will be some traffic north and south along the coast and a small amount of traffic across the North Sea to Denmark, Norway and Sweden, all mostly in the summer months, perhaps as boats make for the Baltic Sea which is a popular cruising area. It should be borne in mind that sailing boats do not necessarily follow direct routes, depending on wind direction.

- We have some concerns that when new arrays are being planned not enough consideration is given to the interaction with existing arrays of those being earmarked for the future. Each new array displaces larger commercial and fishing vessels which can result in increased concentration of traffic between arrays. This can present an increased hazard for small craft who do not wish to pass through the arrays. It would be good if these issues of interaction could be considered in more detail

- We consider it important that vessels have the right of passage through arrays both during their construction and when they are operational (subject of course to the guidance given in the MCA MGN 372 Amendment 1 (M+F)) so we would not want to see any objections raised to this. In fact, given the point above regarding the concentration of traffic between arrays it can sometimes be safer for small craft to traverse an array I order to avoid shipping channels.

- When considering the density of traffic passing through the area proposed for the array the analysis should not depend on AIS data for small craft. Many still do not carry AIS and many that do only receive and do not transmit their position. There are no numbers available to quantify this but my guess is that it would be prudent to assume that less than 20% transmit.

Rick Ballard

Regulatory & Technical Services
Cruising Association
w: https://www.theca.org.uk/public/rats
m: Redacted
e: Redacted

DAERA

From:	DAERA Marine Information Requests
To:	MS Marine Renewables
Subject:	RE: CM: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023
Date:	12 April 2023 16:29:04
Attachments:	image001.png

Hello Iain,

All teams in MFD have provided nil response for this scoping report.

Many thanks,

Anna

Anna Morgan | Marine Plan Team Placement Student | Department for Agriculture, Environment and Rural Affairs| Klondyke Building | Cromac Avenue | Belfast | BT7 2JA
Contact: Anna.Morgan@daera-ni.gov.uk | Redacted

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 16 March 2023 12:39
Subject: CM: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023

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SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East

from the Aberdeenshire coastline

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Yours faithfully,
Iain

Iain MacDonald
Marine Licensing & Consenting Casework Officer
Marine Scotland - Marine Planning & Policy

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Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB
Email: Iain.Macdonald3@gov.scot
Mobile: Redacted
Website: http://www.gov.scot/Topics/marine/Licensing/marine

Forth Ports

From:	Carol Forman
To:	MS Marine Renewables
Cc:	Pamela Smyth
Subject:	FW: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023
Date:	07 April 2023 11:40:22

Hi Iain

I can confirm Forth Ports has no comments on the proposed application.

For the avoidance of doubt, where applicable, the Applicant will require a Works Licence from Forth Ports Limited prior to any works being undertaken. The applicant should also discuss the requirement or otherwise of a Notice to Mariners with Forth Ports. If required, the applicant should supply the required information to us to allow us to issue the Notice to the required distribution.

Kind regards.
Carol

Carol Forman | In-house Paralegal | LSS Accredited Paralegal | Forth Ports Limited
Head Office | 1 Prince of Wales Dock | Edinburgh | EH6 7DX
T: 0131 555 8721 | Redacted | https://forthports.co.uk

From: MS.MarineRenewables@gov.scot [mailto:MS.MarineRenewables@gov.scot]
Sent: 16 March 2023 12:39
Subject: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023

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My working days are Monday to Thursday, generally 08:30-17:00

Please communicate with Marine Scotland - Licensing Operations Team (LOT) via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries. For any urgent queries please contact me via mobile.

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MAU

marinescotland

Ossian Offshore Wind Farm

Marine Analytical Unit Response

The Ossian Offshore Wind Farm 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 scoped into the Environmental Impact Assessment. We provide general advice on how to deliver this at Annex 1.

Overview

The MAU welcomes the understanding that offshore developments have onshore socio-economic impacts and encourages the developer to assess onshore impacts in the subsequent stages of the licensing process.

The MAU welcomes the developer's plan to use Scottish Government's guidance on identifying local study areas, as well as MAU General Advice for Socio-Economic Impact Assessment, and other relevant guidance documents mentioned in the scoping report.

The MAU expects that if impacts on local areas are not possible to identify at this stage, the developer will assess potential impacts and will describe how baseline data will be collected to assess these impacts in the future, including desk study methods and primary data collection from expert stakeholders as well as communities who are likely to be affected by the development. Potential impacts flagged up by experts and communities need to be scoped into the socio-economic assessment in addition to impacts that have already been identified.

MAU also welcomes the statement in paragraph 701 of the scoping report that, "the baseline analysis of local socio-economic study area(s) and stakeholder consultation may identify other types of socio-economic impacts that should be considered, such as distributional effects and socio-cultural impacts. Any other types of socio-economic impacts identified will be assessed, or if considered not to be relevant, justification will be provided for scoping them out of the socio-economic assessment."

The MAU understands that at the point of applying for a license the developers may not know which ports or landfall locations they will use, nor where they will source their workforce from. Without this information it is difficult to plan primary research and provide a detailed assessment of social impacts, nevertheless we expect transparency on what has the potential to significantly impact but which cannot be assessed fully due to a lack of sufficient detail.

In paragraph 705, the developer states that significance methodology set out in section 4 will be followed. We would like to note that magnitude and significance methodology is not always adequate for assessing social impacts on communities, as from the macro perspective of national economy and society, these impacts may be seen as affecting only a small group of people. In reality, changes within communities might be quite significant, especially given the potential cumulative effects of the upcoming ScotWind developments. We, therefore, encourage the developer to give careful consideration to methodologies used to assess the significance of social impacts, and to reflect this in their future licensing documents.

With regards to impacts that have already been identified, the MAU welcomes inclusion of commercial fisheries into the socio-economic impact assessment.

The MAU broadly agrees with the scoping report's proposed approach for assessing economic impacts.

Scoping of impacts

Economic impacts

We broadly agree with the scoping report's proposed approach for assessing economic impacts. It is welcomed that the assessment will include direct, indirect and induced impacts and take account of deadweight, leakage, displacement and substitution. The inclusion of sensitivity analysis to account for risk, uncertainty and optimism bias is also welcomed.

The proposed approach to assess employment impacts in terms of years of employment and jobs seems appropriate. 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) 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 EIA, 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.

Social impacts

The MAU would like to encourage the developer to engage with communities that will be affected by the development once local areas are identified. We would like to see a description of how these communities will be identified, what methods the developer will use to engage with communities, what methods will be used to capture communities' concerns, and how primary data collected from communities will be analysed. The MAU encourages the developer to engage trained social scientists to conduct research and primary data collection with communities to ensure that the social science research

methods are designed and executed correctly so that the engagement is delivered in as ethical and meaningful way as possible.

Distributional effects may occur on individuals according to their characteristics such as income level, geographical location, gender, age etc. We expect that the assessment will be conducted with local people representing different groups to understand how the development will affect different groups within communities.

The MAU expects that potential impacts flagged up by communities are scoped into the socio-economic assessment in addition to impacts already identified in the scoping report, and adequately assessed.

Conclusions

The MAU broadly agrees with the scoping report's proposed approach for assessing economic impacts. With regards to social impacts, if impacts on local areas are not possible to identify at this stage, we expect the developer to assess these impacts in the future, and include impacts identified by expert stakeholders and communities in the assessment. Most importantly, we would like to encourage the developer to be transparent with regards to their methodological choices (e.g., how data from communities will be collected and analysed). This information will help the MAU understand whether social impacts have been adequately assessed.

Annex 1: General Advice for Socio-Economic Impact Assessment Marine Analytical Unit, December 2022

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

Section 1. Some general best practice tips

- Take a proportionate approach to SEIA in line with the size and generating capacity 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 the 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 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 Scotland 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
- 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 (eg 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;
- public and private;
- house prices and rent / accommodation costs;
- homelessness and other housing problems; and
- personal and property rights, displacement and resettlement

[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

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, 2019	Annual economic statistics publication including GVA and employment data for marine economy sectors.	Scotland's Marine Economic Statistics 2019 - gov.scot (www.gov.scot)
Scottish Sea Fisheries Statistics, 2021	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	Summary - Scottish Sea Fisheries Statistics 2021 - gov.scot (www.gov.scot)

	fishing fleet and employment on Scottish vessels.	
Scottish Shellfish Farm Production Survey 2021	Statistics on employment, production and value of shellfish from Scottish shellfish farms.	Scottish Shellfish Farm Production Survey 2021 - 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)
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)

NATS

From:	NATS Safeguarding
To:	MS Marine Renewables
Subject:	RE: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023 [SG35019]
Date:	11 April 2023 12:50:13
Attachments:	image001.png

Our Ref: SG35019

Dear Sir/ Madam

We refer to the application above. The proposed development has been examined by our technical safeguarding teams. In the timeframe given to us we have been unable to thoroughly investigate the effects of the proposed development on our Operations, however, the relevant teams are being consulted.

Based on our preliminary technical findings, the proposed development does conflict with our safeguarding criteria. Accordingly, NATS (En Route) plc **objects to the proposal.** We will notify you within 4-6 weeks of the results of our operational assessment. Only if this assessment shows the impact to be acceptable will we be able to withdraw our objection.

We would like to take this opportunity to draw your attention to the legal obligation of local authorities to consult NATS before granting planning permission for a wind farm. The obligation to consult arises in respect of certain applications that would affect a technical site operated by or on behalf of NATS (such sites being identified by safeguarding plans that are issued to local planning authorities).

In the event that any recommendations made by NATS are not accepted, local authorities are further obliged to notify both NATS and the Civil Aviation Authority ("CAA") of that fact (which may lead to the decision made being subject to review whether by the CAA referring the matter for further scrutiny or by appropriate action being taken in the courts).

As this further notification is intended to allow the CAA sufficient time to consider whether further scrutiny is required, we understand that the notification should be provided prior to any granting of permission. You should be aware that a failure to consult NATS, or to take into account NATS's comments when deciding whether to approve a planning application, could cause serious safety risks for air traffic.

If you have any queries regarding this matter you can contact us using the details as below.

Yours faithfully

NATS Safeguarding

E: natssafeguarding@nats.co.uk

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk

NATS Internal

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 16 March 2023 12:39
Subject: [EXTERNAL] SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023

Good Morning,

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REGULATION 13 AND SCHEDULE 4 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2007
(collectively referred to as the "EIA Regulations")

SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline

In respect of the proposed marine licence application for the above works (under the Marine and Coastal Access Act 2009) and the section 36 consent application (under the Electricity Act 1989), Ossian Offshore Wind Farm Limited has requested the Scottish Ministers adopt a scoping opinion in relation to the above proposed works under the above EIA Regulations.

The scoping report submitted by the applicant can be found at: Scoping Report - Ossian Offshore Wind Farm | Marine Scotland Information

To assist the Scottish Ministers in adopting a comprehensive scoping opinion, which will outline the scope and level of detail of information to be provided in the Environmental Impact Assessment ("EIA") Report to be submitted by the applicant with its proposed section 36 consent and marine licence application, please review the scoping report and advise on what you consider should be included within or excluded from the scope of the EIA for the proposed works. In doing so you may wish to consider any comments you may have regarding data sources, proposed methodologies or the requirement for specific studies.

HABITATS REGULATIONS APPRAISAL SCREENING REPORT

In addition, Ossian Offshore Wind Farm Limited has submitted a Habitats Regulations Appraisal ("HRA") Screening Report. The HRA Screening Report provides information to enable the screening of the Ossian Offshore Wind Farm with respect to its potential to have a likely

significant effect on European sites of nature conservation importance.

The HRA Screening Report can be found at: HRA Screening Report - Ossian Offshore Wind Farm | Marine Scotland Information

We would appreciate any comments you may have on the HRA Screening Report and your opinion as to whether or not you are in agreement with the European sites identified.

Please submit your response electronically to ms.marinerenewables@gov.scot by Thursday 13th April 2023. If you are unable to meet this deadline, please contact us as soon as possible to discuss the possibility of an extension to the consultation period. If you have no comments to make please submit a "nil return" response.

Please be advised that this consultation request relates to the proposed section 36 consent and marine licence application for the array area only and not the export cable corridor or onshore elements of the works.

Yours faithfully,
Iain

Iain MacDonald
Marine Licensing & Consenting Casework Officer
Marine Scotland - Marine Planning & Policy

My working days are Monday to Thursday, generally 08:30-17:00

Please communicate with Marine Scotland - Licensing Operations Team (LOT) via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries. For any urgent queries please contact me via mobile.

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB
Email: Iain.Macdonald3@gov.scot
Mobile: Redacted
Website: http://www.gov.scot/Topics/marine/Licensing/marine

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in order to secure the effective operation of the system and for other lawful purposes. The views or opinions contained within this e-mail may not necessarily reflect those of the Scottish Government.
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NATS Operational Assessment

Prepared by:
NATS Safeguarding Office

Technical and Operational Assessment (TOPA)

For Ossian Offshore

Wind Farm Development

NATS ref: SG35019

Scottish Government ref: SCOP-0023

Issue 1

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Publication History

Issue	Month/Year	Change Requests and summary
1	April 2023	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 Ossian Offshore 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	Hub (m)	Tip (m)
1	56.9024	-0.7681	475132	779678	225	399
2	56.8324	-0.5112	490948	772198	225	399
3	56.7130	-0.2376	507981	759310	225	399
4	56.6655	-0.0597	519018	754317	225	399
5	56.5811	0.0453	525735	745112	225	399
6	56.5702	0.0113	523679	743841	225	399
7	56.5846	-0.1746	512218	745123	225	399
8	56.5170	-0.2157	509885	737536	225	399
9	56.4923	-0.3830	499657	734527	225	399
10	56.7787	-0.6724	481228	766020	225	399
11	56.8634	-0.8312	471363	775272	225	399

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	129.5	239.8	30.0	CMB
Perwinnes Radar	57.2123	-2.1309	47.5	88.0	117.4	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 Perwinnes 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
Aberdeen 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

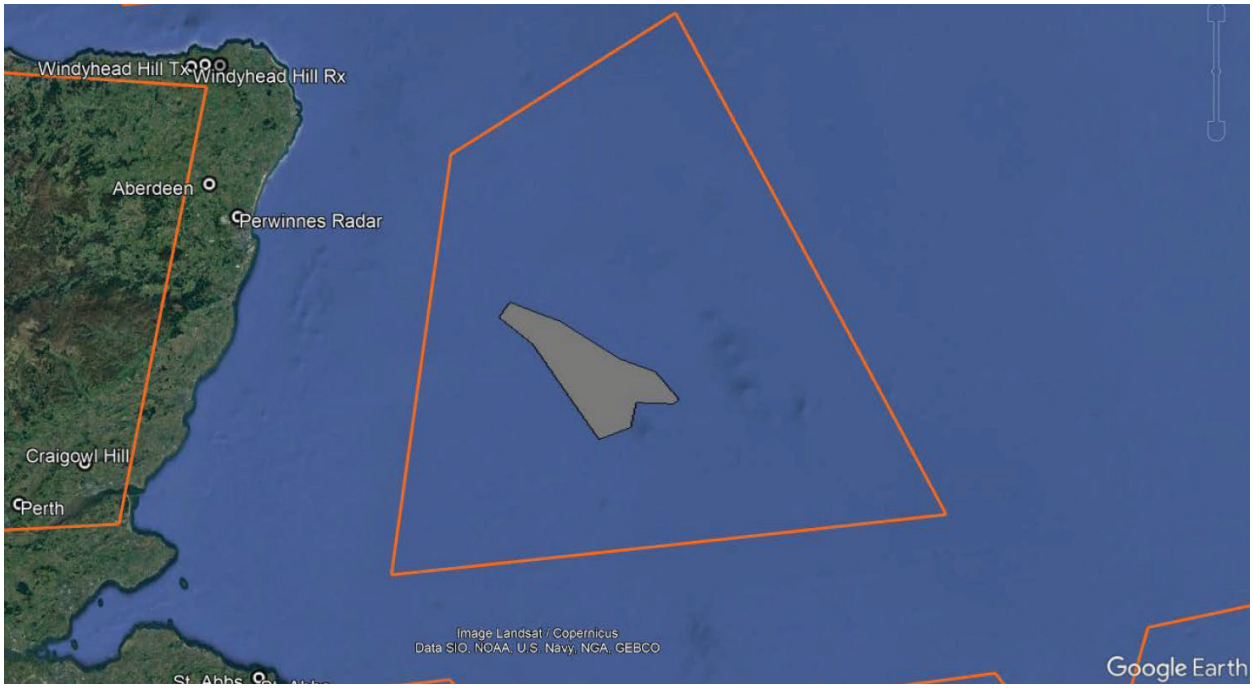

Figure 1: Proposed development location shown on an airways chart

NSTA

From:	Stuart Walters (North Sea Transition Authority)
To:	MS Marine Renewables
Subject:	SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023
Date:	13 April 2023 17:04:38
Attachments:	image001.png

Good Afternoon,

Having reviewed the Scoping Report for the Ossian windfarm the NSTA is content that the developer is already engaging with existing petroleum licence holders which interact with the proposed windfarm array location.

With regards to the one block that is part of the 33rd licence round (27/8), applications are currently being reviewed by the NSTA and any potential interactions with planned windfarm developments are being discussed and addressed with Crown Estate Scotland. Awards from the Round are expected from Q3 2023.

In addition it is noted that there are no interactions with existing carbon storage licences and there are also no overlaps with areas opened for application in the carbon storage licence round. Having reviewed our own studies into future carbon storage potential it appears the array location coincides with an area of medium-low priority for future carbon storage. There is a small area of potentially high priority for future carbon storage just north of the lease option around blocks 27/2 and 27/3 but this does not overlap with the lease option itself. However, the applicant should be aware of the potential for future carbon storage activities near to the array location.

Best Regards,

North Sea Transition Authority

Stuart Walters
Senior Policy Manager – Energy Transition
Strategy Directorate
NSTA, Lower Ground Floor, Sanctuary Buildings, 20 Great Smith Street, London, SW1P 3BT
stuart.walters@nstauthority.co.uk
Redacted
www.nstauthority.co.uk Follow us on Twitter @NSTAuthority

Transport Scotland

Development Management and Strategic Road Safety
Roads Directorate

George House 36 North Hanover St Glasgow G1 2AD
Direct Line: 0141 272 7593, Fax: 0141 272 7350
lain.clement@transport.gov.scot

TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

Iain MacDonald
Marine Scotland
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

ms.marinerenewables@gov.scot

Your ref:
SCOP-0023

Our ref:
GB01T19K05

Date:
06 April 2023

Dear Sirs,

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

REGULATION 13 AND SCHEDULE 4 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2007

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

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

This information has been passed to SYSTRA Limited (SYSTRA) 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 Ossian Offshore Wind Farm Array, located approximately 80 km south-east of Aberdeen, will comprise up to 270 wind turbine generators and associated floating support structures and foundations as well as up to six Offshore Substation Platforms (OSPs). We note that the onshore elements of the project including the export cable corridor(s) and onshore substation will be subject to a separate application.

The nearest trunk road to the site is the A90(T) at Stonehaven.

Assessment of Environmental Impacts

We note that construction of the Array is expected to occur over a period of nine years, and that the integrated floating substructure and turbines will be towed to site by shipping vessels.

Transport Scotland would not envisage any significant impacts on the trunk road network as we would expect the majority of materials for the development to be delivered by sea, with land-based activities being dealt with via the separate application.

As such, Transport Scotland has no specific comment to make on the Offshore SR, other than to state that the proposed assessment methodology of the potential impact of the development on the road network adjacent to onshore infrastructure will require to be included within the separate Onshore Scoping Report. Transport Scotland will be pleased to review and comment on this when submitted.

I trust that the above is satisfactory and should you wish to discuss any issues raised in greater detail, please do not hesitate to contact me or alternatively, Alan DeVenny at SYSTRA's Glasgow Office on Redacted

Yours faithfully

Redacted

Iain Clement

Transport Scotland
Roads Directorate

cc Alan DeVenny – SYSTRA Ltd.

UKCoS

UK CHAMBER of SHIPPING

30 Park Street
London
SE1 9EQ

rmerrylees@ukchamberofshipping.com

020 7417 2843

13 April 2023

Dear Sir/Madam

The UK Chamber of Shipping Response to Ossian Offshore Wind Farm Scoping Report Consultation

• Do you agree that all relevant legislation, policy and guidance documents have been identified for the shipping and navigation assessment, or are there any additional legislation, policy and guidance documents that should be considered?

The list of documentation looks broadly as expected to assess the shipping and navigation impact, however should also include Scotland's National Marine Plan and its policies and Scotland's Sectoral Marine Plan for Offshore Wind Energy and its policies.

• Do you agree with the study area defined for shipping and navigation?

Yes the 10nm study area is an accepted standard. The Chamber recommends a wider routeing study area of 50nm, which may be included as part of the wider cumulative impact assessment to consider routeing impacts of the proposed development in combination with other developments.

• Do you agree with the data and information sources identified to inform the baseline for shipping and navigation including the planned vessel traffic surveys, or are there any additional data and information sources that should be considered?

The Chamber would recommend in addition to the MGN 654 compliant 2 x 14 day periods of vessel traffic data, additional AIS only data for a prolonged period to assist with analysis of seasonal variation and weather routeing which may be get picked up from only the short survey period.

This is widely available and commonplace for large proposed developments such as Ossian.

• Do you agree with the suggested embedded mitigation measures?

The Chamber would expect to see inclusion of all the embedded mitigation measures as a minimum.

• Do you agree that all potential receptors and impacts have been identified for shipping and navigation?

The receptors and impacts are broadly as one would expect for a fixed turbine development, however there are some additional receptors for floating which have are not yet considered.

What will be the construction phase of the build out? Will wet storage be required for turbines not at station? What is the navigational risk for these?

Floating platforms are inherently mobile assets and the greater movement of them will increase the range of impacts that a project has. Platforms will be towed to/from the array area, construction base or wet storage sites and may encounter other traffic or activities whilst on route.

What will be the O&M phase, will it carried out at the array area or is there a need to bring the turbines into more sheltered locations?

In addition, vessel displacement leading to deviation, longer journey time and other environmental/economic impacts besides additional collision risk should be considered and does not present appear.

• Do you agree that the impacts proposed can be scoped out of the shipping and navigation EIA chapter?

The Chamber agrees that no potential impacts should be scoped out.

The Chamber does not agree that the following should be scoped out of the Construction and Decommissioning phase as there will still be an impact. Whilst the impact will be less than during the O&M phase it will nevertheless still be present particularly when the developments are half built/decommissioned:

- Loss of station
- Interference with navigation, communications, and position-fixing equipment
- Reduction of SAR capability

• Do you agree with the approach for cumulative effects assessment and transboundary impacts?

The Chamber agrees that cumulative and transboundary impacts need to be considered and is satisfied with a 50nm study area.

• Do you agree with the proposed assessment approach and list of planned consultees?

Yes

The Chamber trusts these comments will be taken into consideration and looks forward to further engagement with the applicant during the planning and consenting process.

Yours faithfully,

Robert Merrylees
Policy Manager (Safety & Nautical) & Analyst
UK Chamber of Shipping

rmerrylees@ukchamberofshipping.com
Redacted

Angus Council

From:	Stephanie G Porter
To:	MS Marine Renewables
Subject:	RE: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023 OUR REF: 23/00137/PREAPP
Date:	23 March 2023 14:00:24

Dear Sir/Madam

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REGULATION 13 AND SCHEDULE 4 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2007
(collectively referred to as the "EIA Regulations")
HABITATS REGULATIONS APPRAISAL SCREENING REPORT

I refer to the above consultation requests and having reviewed the submitted information, Angus Council has no comments or requirements to add at this stage in respect of the HRA Screening Report, other than to advise the Council supports any comments NatureScot may have in this regard.

In considering the scoping request made in relation to the above EIA Regulations, Angus Council has no comments in regards to the exclusion of any matters from the submitted scoping report but advise it may be helpful for an additional viewpoint from the Angus shoreline (near Montrose) to be included within any future supporting Seascape, Landscape And Visual Impact assessments, where wirelines should also ideally include any intervening approved/implemented/proposed developments which may result in cumulative impacts. I appreciate given the distances involved there is likely to be limited visibility of the proposal from Angus but it would be helpful to have a viewpoint to demonstrate this.

I trust the above proves helpful.

Kind Regards

Stephanie Porter | Team Leader – Development Standards |Planning & Sustainable Growth|Angus Council | Angus House | Orchardbank Business Park, Forfar, DD8 1AN | (Redacted

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 16 March 2023 12:39
Subject: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023

Good Morning,

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REGULATION 13 AND SCHEDULE 4 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2007
(collectively referred to as the "EIA Regulations")

SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline

In respect of the proposed marine licence application for the above works (under the Marine and Coastal Access Act 2009) and the section 36 consent application (under the Electricity Act 1989), Ossian Offshore Wind Farm Limited has requested the Scottish Ministers adopt a scoping opinion in relation to the above proposed works under the above EIA Regulations.

The scoping report submitted by the applicant can be found at: Scoping Report - Ossian Offshore Wind Farm | Marine Scotland Information

To assist the Scottish Ministers in adopting a comprehensive scoping opinion, which will outline the scope and level of detail of information to be provided in the Environmental Impact Assessment ("EIA") Report to be submitted by the applicant with its proposed section 36 consent and marine licence application, please review the scoping report and advise on what you consider should be included within or excluded from the scope of the EIA for the proposed works. In doing so you may wish to consider any comments you may have regarding data sources, proposed methodologies or the requirement for specific studies.

HABITATS REGULATIONS APPRAISAL SCREENING REPORT

In addition, Ossian Offshore Wind Farm Limited has submitted a Habitats Regulations Appraisal ("HRA") Screening Report. The HRA Screening Report provides information to enable the screening of the Ossian Offshore Wind Farm with respect to its potential to have a likely significant effect on European sites of nature conservation importance.

The HRA Screening Report can be found at: HRA Screening Report - Ossian Offshore Wind Farm | Marine Scotland Information

We would appreciate any comments you may have on the HRA Screening Report and your

opinion as to whether or not you are in agreement with the European sites identified.

Please submit your response electronically to ms.marinerenewables@gov.scot by Thursday 13th April 2023. If you are unable to meet this deadline, please contact us as soon as possible to discuss the possibility of an extension to the consultation period. If you have no comments to make please submit a "nil return" response.

Please be advised that this consultation request relates to the proposed section 36 consent and marine licence application for the array area only and not the export cable corridor or onshore elements of the works.

Yours faithfully,
Iain

Iain MacDonald
Marine Licensing & Consenting Casework Officer
Marine Scotland - Marine Planning & Policy

My working days are Monday to Thursday, generally 08:30-17:00

Please communicate with Marine Scotland - Licensing Operations Team (LOT) via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries. For any urgent queries please contact me via mobile.

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB
Email: Iain.Macdonald3@gov.scot
Mobile: Redacted
Website: http://www.gov.scot/Topics/marine/Licensing/marine

*****

Edinburgh Airport

From: Safe Guarding
To: MS Marine Renewables
Cc: Safe Guarding
Subject: Scoping Opinion - Ossian Offshore Wind Farm
Date: 17 March 2023 14:22:17
Attachments: image001.png

Good afternoon,

In respect of the above, I can confirm the location of this development falls out with our Aerodrome Safeguarding zone for Edinburgh Airport therefore we have no objection/comment.

With best regards,
Claire

Claire Brown
Aerodrome Safeguarding & Compliance Officer

t: +44 (0)131 344 3845 m: Redacted
www.edinburghairport.com

Edinburgh Airport Limited
Room 3/54, 2nd Floor Terminal Building
EH12 9DN, Scotland

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-0023
Our Ref: KD/OPS/ML/O6_22_798

Mr Iain MacDonald
Marine Licensing Casework Officer
Marine Scotland – Marine Planning and Policy
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

22 March 2023

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 (collectively referred to as the "EIA Regulations").
REGULATION 13 AND SCHEDULE 4 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2007

Request For Scoping opinion For Proposed Section 36 Application and Marine Licences For the Ossian Offshore Wind Farm Located approximately 80 Kilometres Southeast from the Aberdeenshire coastline.

Thank you for your e-mail correspondence dated 16th March 2023 relating to the Scoping Report submitted by **Ossian Offshore Wind Farm Limited** in relation to the proposed Ossian Offshore Wind Farm development approximately 80 kilometres Southeast from the Aberdeenshire coastline.

Northern Lighthouse Board note the inclusion of Section 7.2 – Shipping and Navigation, within the report, with particular reference to 7.2.7, where you confirm your intention to comply with MGN 654 covering shipping and navigational risk assessment and further in section 7.2.11, where you confirm that this will lead to the development of a Navigational Risk Assessment and that you will consult with the NLB further in relation to your intended development of a Lighting and Marking Plan (LMP) and Navigational Safety Plan (NSP).

NLB also note the inclusion of Cumulative Effects (Section 7.2.8) within this chapter, and the factors upon which other cumulative projects will be screened in or out of the assessment.

NLB have no objection to the content of the Scoping Report, and have no further suggestions for additional content.

Yours sincerely
Redacted

Peter Douglas
Navigation Manager

North Berwick Community Council

From:	Redacte
To:	MS Marine Renewables
Subject:	FW: SCOP-0023 - Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm - 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion - Response Required by 13th April 2023
Date:	17 March 2023 19:44:02

Good Evening

Thank you for your email. You may be aware that a Community Council is run entirely by volunteers, many of whom are involved in other organisations in the town that they represent.

I note that this development is off the shore of Aberdeenshire, so I will respectfully decline to comment, given the size of the documents involved, and the scope of other more local issues we deal with.

Regards

Kenny Miller
Chairman
North Berwick Community Council

RYA

RYA Scotland

Royal Yachting Association Scotland

Caledonia House
1 Redheughs Rigg
South Gyle
Edinburgh
EH12 9DQ

T +44 (0)131 317 7388
E admin@ryascotland.org.uk
W www.ryascotland.org.uk

23 March 2023

Iain McDonald
Marine Licensing and Consenting Casework Officer
Marine Scotland – Marine Planning and Policy
Scottish Government
Marine Laboratory,
375 Victoria Road,
Aberdeen,
AB11 9DB
Redacted

Dear Iain,

Ossian Offshore Windfarm - Scoping Consultation

I have read the relevant parts of the scoping report on behalf of RYA Scotland.

Do you agree with the data sources, including project-specific surveys, to be used to characterise the shipping and navigation baseline within the NRA and Array EIA?
The data to be used for recreational craft are adequate. The requirements for MGN 654 will have to be met but no additional data are needed even though only a proportion of recreational vessels transmit an AIS signal and recreational vessels can be difficult to spot on radar. It should be assumed that a small number of vessels will pass through the site each year. Clearly Shipping and Navigation should be scoped in to the EIA. RYA Scotland would like to contribute to the Navigational Risk Assessment.

Do you agree that all potential impacts (hazards and associated risks) have been identified for shipping and navigation?
An additional risk is the failure of Aids to Navigation marking the devices. There have been several cases where lights or AIS transmissions have failed on wind farms off the coast of Scotland and it has taken several days to replace them due to adverse weather. Mitigation might include the use of virtual AtNs.

Do you agree with the proposed approach to assessment?
Yes.

Do you agree with the approach to screening other developments in or out of the cumulative assessment?
Yes.

RYA Scotland

Royal Yachting Association Scotland

Caledonia House
1 Redheughs Rigg
South Gyle
Edinburgh
EH12 9DQ

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E admin@ryascotland.org.uk
W www.ryascotland.org.uk

Do you have any additional comments relating to the use of floating technology specifically and potential associated additional mitigation options (e.g., operational safety zones) in relation to navigational safety impacts?

From experience with existing floating wind farms we cannot see that the risks are significantly different from conventional schemes. A little depends on where the anchor chains are connected but we see no reason for operational safety zones and would be opposed to them being granted. I feel that creating safety zones by itself is not mitigation. It only becomes mitigation when the zone is actively enforced. Most recreational sailors will keep well clear off wind turbines, as they would when passing a ship at anchor.

Yours sincerely,

Redacted

Dr G. Russell FCIEEM(retd) FRMetS
Planning and Environment Officer, RYA Scotland

Scottish Water

Friday, 17 March 2023

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 - Redacted
www.scottishwater.co.uk
Follow Us

Dear Customer,

Ossian Offshore Wind, 80m -SE OF Aberdeenshire coastline, Aberdeenshire, DD10 0AF
Planning Ref: SCOP-0023
Our Ref: DSCAS-0083184-2BD
Proposal: Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline

Please quote our reference in all future correspondence

Audit of Proposal

Scottish Water has no objection to this planning application; however, the applicant should be aware that this does not confirm that the proposed development can currently be serviced. 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.

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
Redacted

Yours sincerely,

Ruth Kerr.
Development Services Analyst
Redacted

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."

SEPA

From:	Planning.North
To:	MS Marine Renewables
Subject:	RE: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023
Date:	22 March 2023 14:16:24

OFFICIAL

Thank you for your consultation below. We understand that that this consultation request relates to the proposed section 36 consent and marine licence application for the array area only and not the export cable corridor or onshore elements of the works. In that case please refer to SEPA Standing Advice for Marine Scotland on marine consultations and the extracts as below.

Marine Scotland

2.2 Please do not routinely consult SEPA directly on any applications which are purely within the marine environment, including at any stage of EIA or repeat consultations. Please consider our standing advice in Section 3 and Table 1 as SEPA's views and consultation response, where relevant.

2.3 Notwithstanding the advice above, should there be a development proposal of potentially significant impact on aspects of the environment directly regulated by SEPA which is not dealt with adequately by our standing advice or is novel or unusual, then please do consult us specifying exactly the aspect of the environment regulated by SEPA on which advice is sought.

Section 3 Advice for Marine Scotland
Standing advice
For all matters covered by the below advice, SEPA has not assessed the application, has no site-specific comments to make and, where relevant, does not consider EIA is required from our perspective.

Bathing Waters

Any operation should be cross checked to see if the proposed site is in or adjacent to a designated bathing water (within 2 km). If so, all physical operations should be done outwith the Bathing Water Season (1 June to 15 September).

If works to be done within Bathing Water Season, a strong case should be made as to why a particular operation would not present a risk to Bathing Waters.

Please refer to the Bathing waters section of our website www2.sepa.org.uk/bathingwaters/ for further guidance on the Bathing Waters Directive (2006/7/EC).

Pollution prevention

Many operations could potentially give rise to risk of pollution through silt mobilisation, silt suspension or chemical or oil spillages. To prevent pollution and safeguard marine ecology interests it is vital that good working practice is adopted, and appropriate steps taken to prevent water pollution and minimise disturbance to sensitive receptors. Measures need to be in place to minimise the release of sediment plumes and to contain and prevent construction and waste materials e.g., paint from falling from a structure into the water body beneath. Where appropriate, mitigation measures should be sought within method statements and onsite

compliance should be confirmed through site visits.

Please refer to gpp-5-works-and-maintenance-in-or-near-water.pdf (netregs.org.uk). This includes working with concrete, cement and grout.

SEPA has no objection to the release of sediment tracing material into the water environment for the undertaking of a dispersion study (e.g. for aquaculture or septic tank flows). However, we strongly recommend the use of biodegradable material. We do not consider the use of non-biodegradable products (e.g. microplastic beads) to be the best environmental option.

On-shore works and restoration

With regard to works on the shoreline, the applicant should refer to the appropriate sections in the Guidance for Pollution Prevention (GPPs) and CIRIA Guidance, in particular C744 Coastal and marine environmental site guide. 2nd edition, 2015 CIRIA. Disturbance to the shoreline should be minimised and the shore restored to as near its former condition following the works as reasonably possible on completion of the works. SEPA recommends that new infrastructure, including sea outfalls (including septic tank outfalls), be buried where possible and redundant structures and materials be removed.

Please refer to CAR_a_practical_guide.pdf (sepa.org.uk) for a guide to The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) including an overview; definitions of the regimes; levels of authorisation and the General Binding Rules.

The developer should consider if waste deposition could constitute landfill and should therefore be subject to authorisation under PPC and should comply with all relevant environmental legislation and to check our website at www.sepa.org.uk/regulations/ and contact SEPA via the online form with any site-specific issues. Where appropriate, any waste materials should be removed and disposed of at a licensed onshore site.

Dredge spoil

Dredged material should be disposed of at an offshore sea disposal site and that work must be carried out in line with best dredging practices. Material should be deposited on the beach below MHWS and allowed to disperse naturally. If any dredged material accumulates above MHWS, disposal operations must cease until the material has dispersed.

Waste material (includes dredge spoil) above the low water mark

Waste material, which includes dredge spoil, deposited above the low water mark is subject to Waste Management Licensing controls regulated by SEPA unless it is subject to a licence issued under Part 4 of the Marine (Scotland) Act 2010 (which can extend to Mean High Water Spring Tide including within estuaries, rivers and channels), in which case it is excluded from such controls. However, if the waste deposition could constitute a landfill, then PPC not Waste Management Licensing would apply, and in this situation no Marine Licence exclusion is provided for.

Where dredge spoil is used for land reclamation works or harbour works then the method of construction will determine how the activity is regulated. If the works are carried out by way of deposit of material directly onto the intertidal zone or within a permeable bunded area (for example a bund made of placed stones) then the works will be considered to be occurring in the

marine environment and will be regulated by Marine Scotland. If the works are constructed by way of initially creating an impermeable bund (such as a sheet piled metal wall) then the use of waste such as dredge spoil for infill works will be considered to be occurring above mean high water springs and therefore will be controlled by SEPA. Such works would require either a waste management licence or a waste management exemption.

The applicant should consult the local SEPA Regulatory Services team (see contact sheet for details) for advice on whether or not the proposed waste deposition would constitute a landfill and hence fall within PPC regulation, including for the controlled placement of dredged sands from harbours onto adjacent beaches and/or seabed.

Decommissioning

While MS-LOT consult on Marine Licence applications for decommissioning, the applicant will consult themselves on the Decommissioning Programme (as per Energy Act 2004) required to be submitted as part of the s.36/Marine Licences issued for renewables construction. SEPA does not require to be consulted and will provide no comments on the Decommissioning Programme.

Please ensure that conditions cover decommissioning where appropriate and the removal of all devices and as much of the support infrastructure/cabling is removed and all waste materials are removed and reused, recycled or disposed of at a licensed onshore site.

Regards

Clare

Clare Pritchett
Senior Planning Officer
Planning Service, SEPA
Email: planning.north@sepa.org.uk
Telephone: Redacted
Part Time: Tuesday, Wednesday & Thursday

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 16 March 2023 12:39
Subject: SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion – Response Required by 13th April 2023

Good Morning,

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REGULATION 13 AND SCHEDULE 4 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2007
(collectively referred to as the "EIA Regulations")

SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline

In respect of the proposed marine licence application for the above works (under the Marine and Coastal Access Act 2009) and the section 36 consent application (under the Electricity Act 1989), Ossian Offshore Wind Farm Limited has requested the Scottish Ministers adopt a scoping opinion in relation to the above proposed works under the above EIA Regulations.

The scoping report submitted by the applicant can be found at: Scoping Report - Ossian Offshore Wind Farm | Marine Scotland Information

To assist the Scottish Ministers in adopting a comprehensive scoping opinion, which will outline the scope and level of detail of information to be provided in the Environmental Impact Assessment ("EIA") Report to be submitted by the applicant with its proposed section 36 consent and marine licence application, please review the scoping report and advise on what you consider should be included within or excluded from the scope of the EIA for the proposed works. In doing so you may wish to consider any comments you may have regarding data sources, proposed methodologies or the requirement for specific studies.

HABITATS REGULATIONS APPRAISAL SCREENING REPORT

In addition, Ossian Offshore Wind Farm Limited has submitted a Habitats Regulations Appraisal ("HRA") Screening Report. The HRA Screening Report provides information to enable the screening of the Ossian Offshore Wind Farm with respect to its potential to have a likely significant effect on European sites of nature conservation importance.

The HRA Screening Report can be found at: HRA Screening Report - Ossian Offshore Wind Farm | Marine Scotland Information

We would appreciate any comments you may have on the HRA Screening Report and your opinion as to whether or not you are in agreement with the European sites identified.

Please submit your response electronically to ms.marinerenewables@gov.scot by Thursday 13th April 2023. If you are unable to meet this deadline, please contact us as soon as possible to

discuss the possibility of an extension to the consultation period. If you have no comments to make please submit a “nil return” response.

Please be advised that this consultation request relates to the proposed section 36 consent and marine licence application for the array area only and not the export cable corridor or onshore elements of the works.

Yours faithfully,
Iain

Iain MacDonald
Marine Licensing & Consenting Casework Officer
Marine Scotland - Marine Planning & Policy

My working days are Monday to Thursday, generally 08:30-17:00

Please communicate with Marine Scotland - Licensing Operations Team (LOT) via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries. For any urgent queries please contact me via mobile.

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB
Email: Iain.Macdonald3@gov.scot
Mobile: Redacted
Website: http://www.gov.scot/Topics/marine/Licensing/marine

Fife Council

From:	Martin Mcgroarty
To:	MS Marine Renewables
Subject:	23/00703/CON - SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline- Consultation on Request for a Scoping Opinion
Date:	31 March 2023 14:42:51

FAO Iain MacDonald

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REGULATION 13 AND SCHEDULE 4 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2007 (collectively referred to as the "EIA Regulations")
SCOP-0023 – Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline

Good afternoon Iain,

I refer to the above consultation from Marine Scotland on the Ossian OWF.

Having examined both the Scoping Report and HRA for the Ossian OWF, and given the geographical location of the project, Fife Council has no detailed response to offer to either report at this time.

We would in any case rely on the expert comments of NatureScot to ensure that all appropriate potential environmental effects have been considered and would reiterate our comments on all windfarm projects in the North Sea that representatives of the East Coast Fishing industry should be given the opportunity to comment on the proposals at each stage of development.

Kind regards,
Martin

Martin McGroarty
Lead Professional (Minerals)
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Planning Services
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development.central@fife.gov.uk
www.fife.gov.uk/planning
Follow us on twitter: @FifePlanning
LISTEN | CONSIDER | RESPOND

Fife Council
****

MCA

Vaughan Jackson
Maritime and Coastguard Agency
UK Technical Services - Navigation
Bay 2/24
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105 Commercial Road
Southampton
SO15 1EG

www.gov.uk/mca

Your Ref: SCOP-0023

Date: 6th April 2023

Iain MacDonald
Marine Scotland - Marine Planning & Policy
Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Via email: MS.MarineRenewables@gov.scot

Dear Mr MacDonald,

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATIONS FOR THE OSSIAN OFFSHORE WIND FARM LIMITED - UNDER THE EIA REGULATIONS.

The MCA has reviewed the scoping report provided by Ossian Offshore Wind Farm Limited as detailed in your correspondence of 16th March 2023 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 a moderate amount of traffic with several important commercial shipping routes to/from UK ports and the North Sea. 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.

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

A vessel traffic survey will be undertaken 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. We understand from the information presented in table 7.5 and paragraph 523 that in addition to the preliminary assessment of 28 days (13 – 26 January 2022 and 8 – 21 July 2022) of Automatic Identification System (AIS) data, a dedicated survey vessel located on-site in December 2022 carried out a traffic survey to the standard required in MGN 654. This data will be updated further once the project-specific summer vessel traffic survey has been completed in 2023.

The Development Specification and Layout Plan referred to in Chapter 7.2.5, paragraph 533 and table 2.1 in Annex 2 will require MCA approval prior to construction to minimise 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 at the approval stage.

We note in Chapter 4.3.7, para 198 that Cumulative Effects Assessment will be carried out. As highlighted in paragraph 200, the proximity to other offshore windfarms in particular the proposed Morven and Bell Rock offshore wind farms will need to be fully considered, with an appropriate assessment of the distances between OREI boundaries and shipping routes as per MGN 654.

It is noted that this scoping report concentrates on the array area only. However, attention should still 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.

In Chapter 7.2.5, paragraph 533 compliance with regulatory expectations on moorings for floating wind and marine devices (HSE and MCA, 2017) is identified as a designed in mitigation measure for floating infrastructure. This guidance should be followed, and a Third-Party Verification of mooring arrangements will be required.

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 Annex 4 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. Failure to report the survey or conduct it to Order 1a might invalidate the Navigational Risk Assessment if it was deemed not fit for purpose.

It is noted that the use of HVAC and HVDC transmission infrastructure is not discussed in this report. We would however like to remind the applicant when considering this that in the case of HVDC installation, consideration must be given to the effect of electromagnetic deviation on ships' compasses. The MCA would be willing to accept a three-degree deviation for 95% of the cable route. For the remaining 5% of the cable route no more than five degrees will be attained. If an HVDC cable is being used, we would expect the applicant to do a desk based compass deviation study based on the specifications of the cable lay proposed and assess the effect of EMF on ship's compasses. MCA may request for a deviation survey post the cable being laid; this will confirm conformity with the consent condition. The developer should then provide this data to UKHO via a hydrographic note (H102), as they may want a precautionary notation on the appropriate Admiralty Charts (actions at a later stage depending upon the desk-based study and post installation deviation survey).

Chapter 7.2.10, Scoping Questions to Consultees:

1- Do you agree with the data sources, including project-specific surveys, to be used to characterise the shipping and navigation baseline within the NRA and Array EIA?

   Yes.

2- Do you agree that all potential impacts (hazards and associated risks) have been identified for shipping and navigation?

   Yes

3- Do you agree with the proposed approach to assessment?

   Yes

4- Do you agree with the approach to screening other developments in or out of the cumulative assessment?

   Yes.

5- Do you have any additional comments relating to the use of floating technology specifically and potential associated additional mitigation options (e.g., operational safety zones) in relation to navigational safety impacts?

   None.

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 sincerely,

Redacted

Vaughan Jackson
Offshore Renewables Project Lead
UK Technical Services Navigation

SSEN
(SHE Transmission)

Scottish Hydro Electric Transmission Plc
10 Henderson Road
Inverness
IV1 1SN

Paul Darnborough
Ossian Offshore Wind Farm Ltd
Inveralmond House
200 Dunkeld Road
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PH1 3AQ

and

Marine Scotland – Licence Operations Team
By email: MS.MarineRenewables@gov.scot

30 March 2023

Dear Paul

REF: Ossian offshore windfarm scoping report consultation

We noted the publication for consultation of the scoping report submitted to MS-LOT by Ossian Offshore Wind Farm on 9th March 2023, and wish to take this opportunity to make the following response.

Whilst we note potential cumulative effects with other sea users identified within the scoping report acknowledges the potential for cumulative effects to occur as a result of the Array interacting with '*other plans or projects, including the Proposed offshore export cable corridor(s), other ScotWind sites, and oil and gas activities'* we also draw your attention to the Eastern Green Link 2 (EGL2) subsea cable transmission reinforcement project which aligns on an approximately north -south orientation c. 22 km to the east of the Ossian array site at its closest point, and for which a Marine Licence Application was submitted to MS-LOT in July 2022 under application number 00009943.

In addition, and as part of our responsibilities to deliver and maintain critical national transmission infrastructure within and connecting the North of Scotland, which is required to support NetZero targets, Scottish Hydro Electric Transmission Plc (SHE Transmission) is also in early-stage routeing development of an addition subsea cable transmission reinforcement Eastern Green Link (EGL) 3. It is likely that this additional critical transmission infrastructure upgrade will be required to route in proximity to the Ossian development site and/or export cable alignments.

SHE Transmission request that present and future cables, both power and telecoms, are given due consideration and that provision is maintained for cables to cross both export cables and the generation site, and that the freedom of the seas is maintained.

SHE Transmission remains committed to working with other legitimate users of the sea in a proactive manner, enabling both parties to deliver successful projects wherever reasonably possible, as such we request that ongoing discussion and consultation between both parties is maintained, and where necessary that proximity and crossing agreements are developed.

Please let me know if you have any questions in relation to the above.

Yours sincerely

Redacted

Felicity Arthur
Marine Consents Manager
Redacted

Aberdeen Airport

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FAO Iain MacDonald
Marine Scotland – Marine Planning and Police

Via Email

ABZ Ref: ABZ3130

27th April 2023

Dear Iain

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

I refer to your request for scoping opinion received in this office on 16th March 2023.

The scoping report submitted has been examined from an aerodrome safeguarding perspective and we would make the following observations:

- The proposed site is located partially within the wind farm consultation zone for Aberdeen Airport and as such aviation impacts should be considered as part of the EIA.

- Some of the proposed turbines may be detected by Aberdeen Airport's primary surveillance radar and generate clutter on air traffic control displays and mitigation may be required.

Our position with regard to this proposal will only be confirmed once the turbine details are finalized and we have been consulted on a full planning application. At that time we will carry out a full safeguarding impact assessment and will consider our position in light of, inter alia, operation impact and cumulative effects.

Yours Sincerely
Redacted

Kirsteen MacDonald

Safeguarding Manager
Aberdeen Airport
Redacted
abzsafeguard@aiairport.com

Aberdeenshire Council

Aberdeenshire COUNCIL

Our Ref: ENQ/2023/0414
Your Ref: SCOP-0023

Ask for: Iain McMillan
Tel: 01467 534919
Email: iain.mcmillan@aberdeenshire.gov.uk

Marine Scotland
Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

26 April 2023

Dear Sir/Madam

Consultation on Scoping Opinion for Proposed Section 36 and Marine Licence at Ossian Offshore Wind Farm, 80km South-East from The Aberdeenshire Coastline

Thank you for consulting Aberdeenshire Council on this request for an EIA Scoping Opinion for the Ossian Offshore Wind Farm. This consultation is accompanied by the 'Ossian Array EIA Scoping Report' which has been considered in providing this response. It is noted that a grid connection location is yet to be confirmed for the proposed development and that because of this, the EIA Scoping Report only relates to the Array area and does not include any offshore corridor route to a landfall site.

The Array will be located approximately 80km south-east of Aberdeen and will include 270 floating wind turbines, up to six offshore substation platforms with mooring and anchoring for the floating substructures. Given that this is an offshore wind farm development and based on the distance of the proposed Array from the Aberdeenshire Coastline, the Council has a limited interest in the development to those effects or impacts that would occur within the Aberdeenshire Council Area. This primarily relates to seascape, landscape and visual impact as a result of the proposed development from viewpoints within Aberdeenshire. Marine Archaeology has also been considered as part of this response with consultation undertake with the Council's Archaeology Service.

Chapter 7.5 of the Scoping Report considers the Seascape, Landscape and Visual Resources associated with the proposed development. This includes an outline of the study area, baseline environment and potential impacts from the development. Baselines of the offshore seascape, coastal character and visual amenity are provided within Chapter 7.5. It is noted that because of the curvature of the earth, the distant wind turbine structures may appear beyond the horizon minimising their visual impact. It is also noted though that receptors on the elevated Aberdeenshire Coastline may be able to gain partial views of the development.

Wireline views from four viewpoints showing an indicative layout of the proposed development are shown in Figure 7.11 to Figure 7.14 of the EIA Scoping Report. These viewpoints are:

- Viewpoint 1: Girdle Ness
- Viewpoint 2: Tullos Hill
- Viewpoint 3: Coast Road near Souter Head
- Viewpoint 4: Portlethen

The wireline drawings provide a worst-case scenario showing an indicative layout of the Array with the highest upper blade tip height up to 399m. The wirelines show that there would be very limited visibility of the Array from the viewpoints. It is also confirmed that aviation lighting on turbines would be below the horizon line and therefore unlikely to be visible from the viewpoints.

At Chapter 7.10, three questions are asked in respect of SLVIA. These are answered below:

Q1: Do you agree that the evidence suggests that visibility of the Array will be minimal, and that receptors beyond 70 km from the site boundary do not need to be considered?

A: Yes, Aberdeenshire Council agreed that receptors beyond 70km from the site boundary need not be considered as part of any EIA. The wireline diagrams provided suitably demonstrate that the seascape, landscape and visual impact of the development would be minimal.

Q2: Do you agree that offshore receptors, within the 70 km SLVIA study area, including offshore seascape character and people working in the marine environment, are of low sensitivity to the type of change proposed?

A: Yes, Aberdeenshire Council agrees that the offshore receptors within 70km of the SLVIA study area are of low sensitivity to the type of change proposed.

Q3: Do you agree that the assessment of seascape, landscape and visual environment and cultural heritage setting receptors should be scoped out of the Array EIA Report?

A: Yes, Aberdeenshire Council agrees that the assessment of seascape, landscape and visual environment and cultural heritage setting receptors should be scoped out of the Array EIA Report.

The Council's Archaeology Service has considered the Marine Archaeology chapter of the EIA Scoping Report and provided answers to the questions for consultees as set out at chapter 7.4.10. These are outlined below:

Q1: Do you agree with the marine archaeology study area as defined e.g. the site boundary and a wider search area encompassing 2 km from the limits of the site boundary?

A: Yes

Q2: Do you agree that the designed in measures described are suitable for managing and mitigating the potential effects of the site boundary on the marine archaeology receptors?

A: Yes

Q3: Do you agree that it is appropriate to scope out those impacts proposed to be scoped out, and that the assessment of marine archaeology receptors should be scoped out of the Array EIA Report?

A: Yes

It is noted that an approach will be taken whereby separate applications are lodged for the Array and then the offshore cable corridor route to landfall. It is therefore anticipated that a separate EIA Scoping Report will be prepared, and Aberdeenshire Council would welcome the opportunity to comment on this and contribute to this sperate EIA Scoping Opinion. Should you require any clarity on the above points, please contact Aberdeenshire Council.

Yours faithfully

Redacted

Paul Macari
Head of Planning and Economy

Marine Scotland Science

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Iain MacDonald
Marine Scotland Licensing Operations Team
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

13 April 2023

OSSIAN OFFSHORE WINDFARM - SCOPING OPINION

Marine Scotland Science (MSS) have reviewed the request from MS-LOT and provide the following advice.

Commercial fisheries

MSS are content with the potential impacts identified for each stage of the project development in relation to commercial fisheries, and agree that all impacts should be scoped in.

MSS advise that the commercial fisheries assessment for the EIA would benefit from the addition of MMO/Marine Scotland surveillance sightings data. This would help to further improve the baseline fisheries data for the study area.

Yours sincerely,

Renewable Energy Environmental Advice group
Marine Scotland Science

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E: MSS_Advice@gov.scot

Iain MacDonald
Marine Scotland Licensing Operations Team
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

18 May 2023

Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm – 80km South-East from the Aberdeenshire coastline

Marine Scotland Science (MSS) have reviewed the request from MS-LOT and provide the following advice.

Physical environment / coastal processes

Specific question: Do you agree with the developer that physical processes can be scoped out of the EIA Report for the proposed development? **No, some aspects of physical processes should be scoped in to the EIA. A table is provided below outlining further details.**

EIA Scoping Report Section 5.1.1 Introduction:
Water column processes (mixing and stratification) should be included in the list of physical processes. The baseline description should include details of stratification including what the water column structure is like through the year (e.g. seasonal 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). The strength of

stratification should be noted, as well as what additional mixing would be required to alter the timing and extent of stratification. Typical frontal positions in the region should also be noted. The link between stratification and fronts to primary productivity and higher trophic levels and ecosystem services should be noted.

EIA Scoping Report Section 5.1.7 Potential impacts after the implementation of designed in measures:

This section (Table 5.3) scopes out all physical processes from the EIA. This conclusion is mainly based on other recent EIAs for developments in the region, in shallower water and closer to shore, concluding there to be insignificant effects on physical processes. The proposed Ossian offshore wind farm is somewhat different from these other development in that it is in deeper water that seasonally stratifies, and is using floating foundations, rather than fixed foundations. It is the opinion of MSS that some aspects of physical processes could be scoped out of the EIA, based on evidence from previous developments, but there are some potential effects that should be scoped in. MSS acknowledges that the EIA may conclude these impacts to be small/insignificant but there is insufficient evidence to scope them out of the EIA.

The table below lists the impacts proposed by the developer to be scoped out and the advice of the Marine Directorate as to whether they should be scoped in or out. Some justification is also provided.

Impact (as written in EIA Scoping Report)	**MSS advice**	**Justification**
Increase in SSCs and associated deposition due to construction activities	Scope out	Justification provided in EIA Scoping Report is adequate.
Increase in SSCs and associated deposition due to operation and maintenance activities	Scope in increase in SSC due to mooring lines and cabling	Scour due to mooring lines and cabling should be considered. Components of the wind farm with fixed foundations resembling those on other nearby wind farms that concluded there to be insignificant impact can be scoped out.

Impacts to the wind field and wave and tidal regimes, due to the presence of infrastructure	Scope out all except how the wind field may change	Scope in impacts on physical processes resulting from changes to the wind field, including changes to mixing and stratification (see impacts to seasonal stratification below).
Impacts to seasonal stratification due to the presence of infrastructure	Scope in impacts due to infrastructure and changes in wind field	Downstream reductions in the wind field could change mixing and stratification. https://doi.org/10.3389/fmars.2022.818501 This windfarm is likely to be in an area of the North Sea that experiences seasonal stratification. Any changes to the extent and timing of stratification could impact primary productivity, higher trophic levels and ecosystem services. The information available on this subject relies on research modelling that is at a very early stage. MSS acknowledges that it may be very challenging to quantify potential changes and therefore suggest that this potential impact is qualitatively considered in the EIA allowing decision makes to weigh up potential impacts. One qualitative approach could be to estimate the reduction in mixing anticipated by a reduced/changed wind field and how this may impact on the stratification in the region. Comparison could also be made to potential changes due to anticipated climate change, to provide further evidence for decision makers. Recent papers have shown that fixed foundations can lead to changes in regional

		stratification, similar in magnitude to inter-annual variability. https://doi.org/10.3389/fmars.2023.1178330 This proposed wind farm utilises floating foundations which are larger than fixed foundations. As for wind wake impacts, this should at least be qualitatively considered in the EIA. The draft of the foundations could be compared to the surface mixed layer depth during periods of stratification, and comments made about how much additional mixing would be required to alter stratification.
Impacts to the sediment transport and sediment transport pathways due to the presence of infrastructure	Scope in changes to sediment transport due to mooring lines and cabling	Any resuspension of sediment due to scour around mooring lines and cabling could contribute to changes in sediment transport. As for the SSCs comment above, the fixed foundation components could be scoped out as there is a strong evidence from previous EIAs in the region.
Increase in SSCs and associated deposition due to decommissioning activities	Scope out	Justification provided in EIA Scoping Report is adequate.

Section 5.1.9 Potential cumulative effects

This section needs to be revised following the inclusion of the potential effects highlighted above, most notably potential changes to stratification. MSS recognises that there could be cumulative impacts on stratification due to large scale offshore wind development, that this is an area of ongoing active research, and that this may be challenging to quantify. A qualitative assessment should therefore be included in the cumulative impacts section of the EIA.

Section 5.1.10 Potential transboundary impacts

Physical processes, most notably potential changes to stratification, should be included in the trans boundary screening, although the extent of current development is unlikely to change the conclusion.

EIA Scoping Report Appendix 5:

The table entry in Appendix 5 of the EIA Scoping Report (see extract below) *unclearly* refers to two separate data sources

1) Scottish Shelf Model Climatology https://doi.org/10.7489/12037-1

website: https://marine.gov.scot/themes/scottish-shelf-model

2) Climatology of Surface and Near-bed Temperature and Salinity on the North-West European Continental Shelf for 1971–2000 https://doi.org/10.7489/1900-1

There is also this additional data source that could be considerd (27 year reanalysis of the Scottish Shelf Model) – The Scottish Shelf Waters Reanalysis Service

https://doi.org/10.7489/12423-1

Website: https://tinyurl.com/SSW-Reanalysis

Source	Coverage	Data Provision	Reference
Marine Science Scotland Scottish Shelf model	UK Waters, including The North Sea and English Channel	Climatology: temperature, salinity and current speed characteristics	Berx and Hughes, 2009, Marine Scotland, 2022d

Extract from the table in Appendix 5 – physical precesses – baseline environment

Yours sincerely,

Renewable Energy Environmental Advice group

Marine Scotland Science

SFF

SCOTTISH FISHERMEN'S FEDERATION

Our Ref: FH/19/04

Your Ref:

20 April 2023

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Ossian Wind Farm Ltd Request EIA Scoping

This response to the scoping request 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 the Shetland Fishermen's Association, and the chair of NECrIFG has also been consulted.

SFF note the following points:

Page 1, para 13, of the report indicates that the offshore cable corridor(s) will not be part of this scoping report and will be dealt with in the future. To ensure cable routes are selected efficiently, SFF recommend that early consultation should be carried out with the fishermen. The local fishermen have the knowledge of the area and can advise on seabed conditions where cables burial can be possible that would suit both fishers and renewable to choose the appropriate route.
In addition, the SFF is very concerned that this development is in such a rush to build and produce power that the Project Design Envelop (PDE) commonly known as Rochdale Envelope is going to be stretched to the limit. Turbines are not defined, mooring systems are not defined, cabling is not defined, customers are not defined, with this lack of clarity a terrestrial planning authority would be hard pushed to accept such an application.

Page 7, para 92, states that the turbines will be supported by floating substructure and the substructures will be fixed to the seabed with up to nine mooring lines per foundation and anchored to the seabed via one or a combination of the anchoring types. Because of lack of technical specification for any of the mooring systems, it is impossible to comment on the consequences of design. For example, using nine moorings for each turbine, worst case scenario could require up to 2km for moorings which could technically leave no room for fishing between the turbines and create massive snagging hazard for the fishing vessels. The SFF will not consider that the developers have provided enough information to grant the license.

Page 14, Site Selection Methodology, para 135, states that, according to the SMP, the key concerns within the E1 PO Area included minor socio-economic impacts to commercial fishing. The fact that the area is fish spawning grounds for herring *Clupea harengus*, cod *Gadus morhua*, whiting *Merlangius merlangus*, plaice and sandeel *Ammodytes* spp. (Scottish Government, 2020a) therefore the impacts on them should be scoped in.

Page 45, Table 6.2: "Potential Impacts Identified for Benthic Subtidal Ecology in the Absence of Designed In Measures", of the document fails to scope in the boulder relocation effects since the study show boulder exist in the project's site. The SFF recommend that boulder relocation should be scoped into the EIA report.

Page 51, 6.1.11. SCOPING QUESTIONS TO CONSULTEES

• Do you agree with the two study areas presented for benthic subtidal ecology?
Answer: Yes.

• Do you agree that the existing data available to describe the benthic subtidal ecology baseline remains sufficient to describe the physical environment in relation to the Array? Are there any further desktop datasets which you would recommend are included?
Answer: Seeking advice from the fishermen who have fished the area should help.

• Do you agree that all potential impacts (Table 6.2) have been identified for benthic subtidal ecology?
Answer: No. SFF believe Page 45, Table 6.2: fails to scope in the boulder relocation since the study show significant boulders exist in the north of the project site. As above SFF recommend that boulder relocation should be scoped in in the EIA report.

• Do you agree that the designed in measures described provide a suitable means for managing and mitigating the potential effects of the Array on the benthic receptors?
Answer: In terms of temporary habitat loss and/or disturbance and long-term subtidal habitat loss, the developer need to provide baseline and monitoring regime going forward so that any change can be quantified.
As indicated earlier, the measures fail to consider the potential effects of the Array on boulders.

• Do you agree that the identified impacts in Table 6.5 should be scoped out of the Array EIA Report?
Answer: No. Specific emphasis should be given on scoping in the "Effects to benthic subtidal ecology due to accidental pollution" during all phases.
In terms of "Effects to benthic subtidal ecology due to EMF" the SFF believe that this should be scoped in because there is no sufficient practical demonstration that there are no effects. The developer should provide ongoing monitoring of EMF effects to further the science.

Page 52, 6.2. **FISH AND SHELLFISH ECOLOGY**
The document highlights that the significance of the effects on fish and shellfish ecology may result in the requirement for additional mitigation. This will be consulted upon with the statutory consultees throughout the EIA and consultation processes. It is possible that particular mitigation may be required for species such as herring, which are particularly sensitive to subsea noise. This will be discussed via the EIA and consultation processes.

SFF believe that since the impacts of the development on the fishing is obvious, the developer should scope in effective types of mitigation to offset the negative impacts.

Table 6.8: Summary of Key Consultation on the Scoping Assessment for the Array
Page 55, 6.2.11. SCOPING QUESTIONS TO CONSULTEES
The document states "the consultation were addressed 15 November 2022 MS-LOT, MSS, NatureScot Scoping workshop Scoping out of effects on fish and shellfish ecology due to increases in SSCs and associated deposition was discussed and agreed upon, as was temporary habitat loss and disturbance within the operation phase. A currently unpublished report (Putland et al., In prep), was described to the stakeholders to support the proposal to scope out impacts to fish and shellfish due to operational noise. Data sources to inform scoping and assessment were presented to stakeholders, and additional literature sources were recommended by MSS".

SFF believe that scoping out the noise effects on fish and shellfish ecology based on one unpublished study is not sufficient. Since there are other studies that do not agree with the findings of Putland, noise impacts must be scoped in.

• **Do you agree with the study area defined for fish and shellfish ecology?**
Answer: Yes.

• **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 Array? Are there any further desktop datasets which you would recommend are included?**
Answer: No, specific comment on noise above.

• **Do you agree that the designed in measures described provides a suitable means for managing and mitigating the potential effects of the Array on the fish and shellfish ecology receptors?**
Answer: further consideration needs to be given to the EMF, noise, wake effects, boulder movements and seabed disturbance of the project on the fish and shellfish ecology receptors.

• **Do you agree that all potential impacts (Table 6.9) have been identified for fish and shellfish ecology?**
Answer: Yes.

• **Do you agree that the impacts described in Table 6.10 should be scoped out of the Array EIA for fish and shellfish ecology?**
SFF believe that the "Effects to fish and shellfish ecology due to accidental release of pollutants" and "Subsea noise from wind turbine operation impacting fish and shellfish receptors" during operation and maintenance should be scoped in and monitored.

In addition, the "Temporary habitat loss and disturbance" during operation and maintenance should also be scoped in since there is no sufficient evidence in the application to back it up.

"As illustrated in paragraph 492 et seq., commercial fishing activity is relatively low within ICES rectangle 42E9, and a decrease in landings has been observed from 2011 to 2021 (Table 7.1). As a result, the density of commercial fishing vessel traffic through the commercial fisheries study area is low compared to other areas within the North Sea, as illustrated in Appendix 10, Apx Figure 10.6". Pag3 82, para 502, confirms the importance of E1 for spawning ground but the study area is considered low fishing activity area. It may not be currently fully fished but still the area is important

spawning ground; therefore, fisheries ecology would be negatively impacted if the spawning ground is disturbed. Therefore, proper care should be taken during construction, and it should be ensured that no disruptive activity interferes with spawning season.

"502. The SMP for Offshore Wind Energy (Scottish Government, 2020b) notes that "there is potential for areas within E1 to be important fish spawning grounds, including for herring, cod, whiting, plaice and sandeel" and there are potential impacts on commercial fishing in this area (Scottish Government, 2020b)."

7.1.11. SCOPING QUESTIONS TO CONSULTEES

• Do you agree that the existing data available to describe the commercial fisheries baseline remains sufficient to describe the physical environment in relation to the Array and are there any additional datasets you would recommend (please see Appendix 10, Table 10.1)?
Answer: Compare your datasets with the fishing industry records to sense-check the data you have.

• Do you agree with the designed in measures described for the potential effects of the Array on commercial fisheries receptors?
Answer: No, specifically on the first four points in the table 7.4 (No modelling is proposed for this impact). The SFF would expect to see the baseline for commercial fishery to monitor the impact for the life-time of the project.

• Do you agree that all potential impacts have been identified for commercial fisheries receptors (Table 7.4)?; and
Answer: No. Given the worst case scenario is no fishing within the project area so this should be scoped in.

• Do you agree with the potential transboundary impacts presented in section 7.1.10?
Answer: No comment.

Page 131, Socio-economics overview, para 696, indicates that the baseline characterisation of the local socio-economic study area(s) will be undertaken when the ports that will be used during the construction and operation are known. Without that clarity it is impossible for SFF to comment, and the scoping report and the application is incomplete.

Page 132, Table 7.21: "Potential Impacts Identified for Offshore Socio-economics in the Absence of Designed in Measures" of the document states that the project will create employment and may have impact on commercial fisheries.

The SFF realise the fact that project will have negative impact on commercial fisheries; however,
Simply to say "the new jobs" is not enough, the SFF would expect to see the development scoping where the new jobs are created and ensure that they do not replace fishing jobs.

There are many claims throughout the paper about the emissions being resolved by the project, the SFF would expect to see scoped in a genuine auditable range of positive and negative values of emissions engendered by the project from day one to decommissioning, recognising that at that point most of the structures become waste. In light of the stated reason for the enhanced growth of offshore renewables, the climate crisis, there should be an onus on developers to prove beyond reasonable doubt that their projects are focussed on emission reduction, and not simply for profit."

Redacted

Malcolm Morrison
Fisheries Policy Officer
Scottish Fishermen's Federation

RSPB Scotland

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

24th April 2023

Dear Iain,

REQUEST FOR SCOPING OPINION AND COMMENTS ON HABITATS REGULATIONS APPRAISAL SCREENING REPORT FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

Thank you for consulting RSPB Scotland on the above proposed development located within the E1 Plan Option Area. We understand consent would be sort for 50 years, it would consist of up to 270 floating turbines with maximum rotor diameter of 350 meters and maximum blade tip height above lowest astronomic tide of 399 meters, up to six offshore substation platforms, a network of inter-array, scour protection and other ancillary elements . The number of turbines and their dimensions is larger than that presented in the pre-scoping workshop in November 2022. No total capacity nor minimum blade clearance above lowest astronomic tide (known as the 'air gap') have been provided.

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.

We strongly recommend a minimum airgap is finalised early in the process as this is key in avoiding and mitigating seabird collision risk. We further recommend the airgap is in excess of the minimum required for navigational purposes and as high as possible.

Bio-seasons for Kittiwake and Gannet

The RSPB has outstanding issues with the manner in which the bio-seasons definitions from Furness (2015)[2] have been defined for gannet and kittiwake. This is because by using the "migration-free" seasonal definition as opposed to full breeding season the early and later months of the season are effectively excluded. For example, the kittiwake breeding season is defined as May to July, when evidence from colony monitoring shows that birds are present from April at least to August. In the latter part of the season all birds will have fledged but individual birds will still be present with both young and adult birds coming back to the cliff. These are still SPA birds, and those most likely to be affected by impacts from the development

Foraging Ranges for Common Guillemot and Razorbill

We welcome using foraging ranges as published in Woodward *et al*. (2019)[3] to derive connectivity with SPA colonies. We also recommend that site specific data are examined and where the maximum foraging range from the colony exceeds the generic value, that the site-specific value is used.

The exceptions to this are for common guillemot and razorbill. Tracking on Fair Isle showed foraging for both common guillemot and razorbill distances are greater than those of all other colonies. This may relate to poor

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[1] Searle, K. R., O'Brien, S. H., Jones, E. L., Cook, A. S. C. P., Trinder, M. N., McGregor, R. M., Donovan, C., McCluskie, A., Daunt, F., and Butler, A., 2023. *A framework for improving treatment of uncertainty in offshore wind assessments for protected marine birds*, ICES Journal of Marine Science, 2023;, fsad025, https://doi.org/10.1093/icesjms/fsad025

[2] 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 16

[3] Woodward, I., Thaxter, C.B., Owen, E. and Cook, A.S.C.P. (2019). Desk-based revision of seabird foraging ranges used for HRA screening. BTO Research Report No. 724, British Trust for Ornithology, Thetford. ISBN 978-1-912642-12-0.

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prey availability during the study. However, trends for seabirds in the Northern Isles indicate this may be becoming a more frequent occurrence. For all designated sites south of the Pentland Firth (i.e. excluding the Northern Isles), we advise use of mean max (MM) plus one standard deviation (SD) discounting Fair Isle values. For clarity, North Caithness Cliffs SPA is considered to lie south of the Pentland Firth.

	All Northern Isle SPAs	**All sites south of Pentland Firth**
Common guillemot	153.7 MM+SD	95.2 MM+SD
Razorbill	164.6 MM+SD	122.2 MM+SD

In the non-breeding season, seabirds are not constrained by colony location and can, depending on individual species, range widely within UK seas and beyond.

Gannet

Whilst the RSPB agree with the majority of the NatureScot advised Avoidance Rates including the use of a 98.9% avoidance rate for non-breeding gannets, in our opinion, a 98% avoidance rate is more appropriate for breeding gannets. This is because the figures used for the calculation of avoidance rates advocated by the SNCBs are largely derived from the non-breeding season for gannet. During the breeding season, gannets are constrained to act as central placed foragers meaning they return to the colony after feeding in order to maintain territories, incubate eggs and provide for chicks. Once chicks have fledged adult gannets remain at sea and no longer visit the colony. Differences in behaviour between the breeding and non-breeding season are likely to result in changes in avoidance behaviour.

This seasonally defined change in reactive behaviour will also be reflected in the distributional changes occurring due to the presence of turbines. As such, alongside the 70% displacement rate recommended by NatureScot for the assessment of gannet, we recommend the presentation of 60% displacement rate during the breeding season.

EIA Assessment of Significance

An EIA report must include a description of the likely significant effects of the development on the environment. RSPB are frequently presented with a matrix approach to significance which combines the value of a rector with the magnitude of impacts. This formulaic approach is one way to present significance, but the categorisation is not biologically meaningful and may not be the best way to assesses the significance of impacts. Furthermore, the uncertainty in the score, as described by Wade *et al.,* (2016) is typically not incorporated into this approach. This should be case, and we would recommend doing so following the principal that the greater the uncertainty the greater the need for precaution (Searle *et al.,* 2023)

When assessing significance, it is particularly relevant that:

- Seabirds are relatively long-lived, take longer to reach breeding age than most other birds and have just one or two young per year. As a result, their populations are sensitive to small increases in adult mortality.

- NatureScot's latest assessment of 11 Scottish breeding seabird species show that numbers fell by nearly half (49%) between 1986 and 2019[4].
- Governments of the UK have collectively failed to meet 11 out of the 15 indicators of Good Environmental Status (GES) for our seas as required under the Marine Strategy Regulations 2010. The marine birds indicator is moving away from target. For breeding seabirds, more species are now experiencing frequent, widespread breeding failures[5] .
- Black-legged Kittiwake and Atlantic Puffin are red listed on the Birds of Conservation Concern and have been assessed by the IUCN as vulnerable to global extinction.
- The growth of offshore wind is placing great cumulative pressure on seabird colonies.

RSPB Scotland disagree with the magnitude of impact being assessed in terms of predicted increases to baseline mortality. As above, small increases in mortality can have large impacts. It is more meaningful to view impacts across the lifeline of the development in comparison to population size in the absence of the development and consider long-term viability of colonies and time for recovery.

EIA Non-technical Summary

RSPB Scotland advocate for the planning and consenting process to be accessible. In relation to ornithology, the EIA will contain complex statistical models, the output of which is not readily understood by a lay person. A non-technical summary (NTS) is therefore vital to set out the main findings of the EIA report in an accessible way and in plain English so that it is easily understood by the public. It should not just describe the process but also clearly present information (to the specifications of the scoping opinion) with interpretation and explanation with clear figures, maps, and tables as necessary. It should not hide any key messages of the EIA by over-summarising or averaging out findings.

The ornithological section of the NTS should clearly explain what is meant by 'significant' in an ornithological context. It should provide direction to the reader of where in the EIA Report to find information on how the sensitivity of the receptor was assessed and how the magnitude of potential impacts was calculated. If magnitude of impact has been related to a specific element or elements (for example time to recovery following cessation of project or alteration of the long-term viability of the population) this should made clear.

We recommend the NTS contains clear information on how the mitigation hierarchy has been followed. The mitigation hierarchy requires that:

- Adverse impacts should firstly be avoided as far as possible;
- Any remaining adverse impacts should then be minimised or reduced to as low as practical; and

[4] Scottish Biodiversity Indicator – The Numbers and Breeding Success of Seabirds (1986 to 2019) | NatureScot
[5] CEFAS Marine Assessment Tool – Marine Breeding Bird Success https://moat.cefas.co.uk/biodiversity-food-webs-and-marine-protected-areas/birds/breeding-successfailure/

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- For residual adverse impacts which are both unavailable and cannot be reduced further, measures to remedy or offset the impacts should be included within the application.

To make the NTS informative, we welcome the use of short summary tables. We suggest a series of tables are used to present the following information:

- Annual mortality for relevant species using the methods set out in the scoping opinion for the development in isolation
- Annual mortality for relevant species using the methods set out in the scoping opinion for the development in cumulation with impacts arising from any existing or approved development
- Predicted population size of relevant SPA colonies after the lifetime of the proposed development using the methods set out in the scoping opinion presented and as a percentage (min-max) of what it would have been in the absence of the proposed development
- Predicted population size of relevant SPA colonies after the lifetime of the proposed development and other relevant developments (i.e in cumulation) using the methods set out in the scoping opinion and presented as a percentage (min-max) of what it would have been in the absence of the proposed development

Screening for Likely Significance Effects

The test of Likely Significant Effect (LSE) is a simple screening stage to determine whether or not an appropriate assessment is required. Each qualifying interest must be considered in relation to their conservation objectives. We agree with the overarching conclusion of potential for LSE in relation to ornithological features.

An assessment to determine the implications of a plan or project on the identified European sites in view of that site's conservation objectives is therefore required is required. This must consider impacts from the development alone as well as in combination with those from other plans and projects.

Should you require any further information or clarification, please do not hesitate to get in contact.

Yours sincerely,

Catherine Kelham

Senior Marine Conservation Planner
RSPB Scotland

Natural England

Date: 20 April 2023
Our ref: 428059

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BY EMAIL ONLY

Dear Iain

Request for scoping opinion for proposed Section 36 and Marine Licence Application for the Ossian Offshore Wind Farm locates approximately 80km south-east from the Aberdeenshire coast.

Thank you for your consultation dated 16 March 2023. and for the extension you granted us for this response. The following constitutes Natural England's formal statutory response.

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). We have delegated responsibility from JNCC to also advise on offshore wind farms in all English waters out to 200 nautical miles or the median line. Due to our remit, we restrict our comments to impacts to species from English Marine Protected Areas and to species in English waters.

The following documents have been reviewed for this response:

- ossian_wind_-_array_eia_scoping_report_-_eor0811a
- ossian_wind_-_array_hra_lse_screening_report_-_eor0811a

Due to our remit, we have limited our advice to sections 6.1 Benthic Subtidal Ecology, 6.2 Fish and Shellfish Biology, 6.3 Marine Mammals and 6.4 Offshore Ornithology of the EIA Scoping Report and, Chapters 4 Identification of European Marine Sites and Features, and 5 Determination of Likely Significant Effect of the Habitats Regulation Appraisal. Withing these bounds we have restricted our advice to habitats and species from English Marine Protected Areas and habitats and species in English waters. We defer to NatureScot and JNCC for advice on Scottish matters.

Natural England consider that the majority of matters in which we have an interest for English waters have been adequately considered in the EIA Scoping Report and Habitats Regulation Appraisal.

Natural England's detailed advice can be found in Annex 1 of this response.

NatureScot's advice on ornithological impact assessment methodologies differs from that provided by Natural England in some respects. These differences are noted in Annex 1 of this response to provide context to aid with the interpretation of the results of any impact assessment conducted by the applicant.

Natural England do not expect the applicant to undertake a separate impact assessment based on Natural England's advice.

For any queries relating to the content of this letter please contact me using the details provided below.

Yours sincerely

Pete Welby

Northumbria Area Marine Team, Natural England
E-mail: peter.welby@naturalengland.org.uk

Cc NatureScot

Annex 1 – Detailed Advice

Document / Section	Comment
Habitats Regulation Appraisal/ Section 4.4, Table 4.4	**<u>Flamborough and Filey Coast SPA – Common Guillemot</u>** Natural England advise that common guillemot from the Flamborough and Filey Coast SPA should be screened in for potential impacts during the non-breeding season. Whilst Furness (2015) indicates that non-breeding individuals are likely to stay relatively close to their breeding colony in the non-breeding season, there is limited empirical evidence currently exists to support this, to quantify the extent over which this operates, and whether it applies to the same extent for all colonies. Natural England requests that to assess the potential impacts on Flamborough and Filey Coast SPA guillemot in the non-breeding season, the traditional approach of apportioning birds to the relevant SPA using the BDMPS populations as prescribed by Furness (2015). We recognise that this advice differs from that provided by NatureScot / Marine Scotland, who advise that the breeding season mean/max, +1SD foraging ranges should also be used in the non-breeding season for this species, which we do not wish to contradict. However, we consider a specific exception to this advice should be made when considering impacts on Flamborough and Filey Coast SPA, due to the potential for the Ossian to contribute to the in-combination impacts that multiple North Sea developments are already exerting on this SPA feature. We note that other Scottish projects already appear in the English in-combination assessments for this species, so this exception would facilitate the inclusion of Ossian in future assessments. If the applicant and Marine Scotland agree that the applicant should follow the NatureScot advice, it would nevertheless be useful if Ossian's Environmental Statement could include the impact values for non-breeding Guillemot from FFC SPA based on the BDMPS apportioning approach. Alternatively, you could provide this separately to Natural England. This would avoid the need for offshore wind farm developers in the English North Sea and/or Natural England to carry out separate apportioning work for inclusion in relevant in-combination assessments. *Furness, R. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Report no. 164.*
General Advice - ornithology	**<u>Stable Age Apportioning</u>** Natural England advise that, where possible, site-specific ageing data (e.g. from Digital Aerial Surveys (DAS)) be used to age-apportion birds. Where this data is not available, Natural England advise that all 'adult-type' birds are apportioned as adults. Natural England does not support the use of the stable age structure approach for age apportioning, due to:

	a) uncertainty regarding survival rates – in particular for immature age classes, b) lack of information about non-breeding adult components of populations, and c) the underlying assumption that populations are stable (which is not the case for many populations)
General Advice - ornithology	**Spatial approach to displacement in buffer zones** Note that the joint-SNCB (2022) guidance on displacement assessment states that "no gradient of impact of displacement level should be applied to the buffer zone, as there is not sufficient evidence to underpin any such gradient application on a species-by-species basis". Natural England therefore advise that the same displacement and mortality rates should be applied throughout the project area and any buffer area. *Joint SNCB Interim Displacement Advice Note (jncc.gov.uk) (https://data.jncc.gov.uk/data/9aecb87c-80c5-4cfb-9102-39f0228dcc9a/joint-sncb-interim-displacement-advice-note-2022.pdf)*
General Advice - ornithology	**Sabbatical Rates** If there is clear evidence relating to the proportion of adults within the population likely to be taking a sabbatical in any given year, then this can be considered at the population modelling stage. The weight of evidence is on demonstrating: a) the proportion of breeding adults in the population likely to be taking a sabbatical in any given year b) whether the SPA population estimates include or exclude sabbatical birds, and c) whether or not sabbatical birds are likely to use the area of sea around the SPA colony. This evidence can be used to inform whether and how sabbaticals are best incorporated in a Population Viability Analysis (PVA). In the absence of such evidence, Natural England's standard advise is to assume no sabbaticals, i.e. to assume all adult birds are breeding birds. Natural England advise that we do not agree with the use of sabbatical rates to exclude sabbatical birds from impact assessment, nor do we consider the inclusion of sabbatical rates to be appropriate within the apportioning process.
General Advice - ornithology	**Highly Pathogenic Avian Influenza** We note the need for a precautionary assessment of impacts given the recent and ongoing outbreaks of highly pathogenic avian influenza (HPAI) in seabirds. **Please Annex 2 for Natural England's interim HPAI guidance.**

General Advice - ornithology	**Changes to Assessment Methodologies: Kittiwake and Gannet** Collision risk avoidance rates advised by Natural England for kittiwake and gannet are expected to change in the near future. A report reviewing available evidence will shortly be published by JNCC, and following this Natural England will advise new rates are used for kittiwake and gannet. In the meantime Natural England have issued new interim guidance on avoidance rates for use in Collision Risk Modelling and have new interim guidance on avoidance rates for use in Collision Risk Modelling. **Please see Annex 3 for Natural England's Interim guidance on collision risk modelling avoidance rates.** Natural England will also shortly publish a review of gannet macro-avoidance of offshore wind turbines. Natural England note that applying this macro-avoidance rate would likely reduce impacts to gannet predicted from collision, and increase impacts to gannet predicted from displacement.
General Advice	We would like to direct the applicant to our advice on the environmental considerations and use of data and evidence to support offshore wind and cable projects in English waters. We recognise this will not all be applicable for all aspects of the project but will provide a guide for assessments concerning England. *Environmental considerations and use of data and evidence to support offshore wind and cable projects in English waters: https://defra.sharepoint.com/sites/WorkDelivery2512/SitePages/Home.aspx*

Annex 2 - Natural England's Interim guidance on Highly Pathogenic Avian Influenza (HPAI) outbreak in seabirds and Natural England advice on impact assessment (specifically relating to offshore wind)

November 2022

1. We are currently unclear what the short, medium and long-term effects of the 2022 HPAI outbreak will be on seabird colony abundance and vital rates (productivity and survival), though impacts at some English colonies in 2022 were likely substantial (e.g. emerging indications of estimates include adult mortality in ~30% of the UK's only roseate tern colony at Coquet Island SPA, and ~10% of Sandwich terns at the North Norfolk Coast SPA). We do not know the extent of population resilience – for instance, how many non-breeding birds might replace adults dying from HPAI in 2022 in future breeding seasons.

2. We expect HPAI to remain a threat to UK breeding seabirds (and terrestrial species of birds, especially perhaps wintering waterbirds) for the foreseeable future. It will take several years for data to be gathered on abundance, mortality and productivity, so we will need to work with imperfect knowledge in the interim.

3. The species understood to be of greatest relevance for imminent impact assessment of offshore wind farms in England are black-legged kittiwake, Sandwich tern, northern gannet, great black-backed gull, common guillemot and razorbill.

4. We expect seabird data collected prior to summer 2022 (approx. June) to remain a valid representation of 'typical' seabird distribution and density, as this was before mass mortality events began to take place. (At this point, we assume affected colonies will recover in the short or long term, depending on available recruits to colonies, scale of further outbreak, and other factors.) Data collected at sea from summer 2022 onwards will need discussion with Natural England, to understand how the species and colonies of concern, and their density at sea at certain times, may have been affected by HPAI. We welcome engagement with developers actively engaged in data collection through the Evidence Plan process.

5. Implications for data collection planned for projects beyond Round 4 will largely be site- and species-specific, and we recommend careful interpretation of results in consultation with Natural England. As the duration and severity of the epidemic is unknown and evidence will continue to accumulate over time, an iterative approach seems likely to be required.

6. Broadly, we expect any changes in abundance at colonies to be reflected proportionately in the at sea data. That is, it is reasonable to assume distribution patterns will remain broadly similar, but densities to change accordingly.

7. This assumption means that the scale of impact is likely to remain in proportion to the size of the colony. For instance, if a population were reduced by 10% then we would expect 10% fewer collisions. However, where a population has been significantly depleted, it should be considered whether an equivalent level of impact would have greater implications for the newly reduced population. Ideally this should be modelled through e.g. Population Viability Analysis as newly depleted populations could be less resilient and vulnerable to additional impact.

8. This would also reflect the likely need to ensure that the sea areas that support SPA (Special Protection Area) seabird colonies provide suitable conditions to restore populations where HPAI impacts have reduced population sizes, rather than simply maintain them. Natural England will aim to provide conservation advice that reflects any such changes.

9. Given the significant uncertainties about the health and resilience of seabird colonies introduced by HPAI, Natural England is likely to further emphasise the need to continue with a risk-based approach to its advice on additional impacts from development, particularly where populations have been significantly impacted. This is to ensure that the impacts of HPAI are not compounded by those from development.

10. This approach is also likely to be taken to compensation discussions. We are likely to recommend that the nature, scope and scale of compensatory measures reflect the uncertainties around population

trends, recovery and resilience introduced by HPAI.

11. We need much more data, and urgently need all concerned with seabird conservation and related developments to fund monitoring of key variables at important colonies, so that collectively we can make best decisions about impacts and effects in the face of the threat from HPAI.

12. Natural England will shortly publish its advice to Defra underpinning an English Seabird Conservation and Recovery Plan, which includes direct recommendations for seabird recovery, some relating to disease as well as seabird monitoring.

13. We must work collectively to ensure that seabird populations are made more resilient to the type of catastrophic event caused by HPAI. This includes delivering the actions relating to feeding, breeding and survival as outlined in Natural England's recommendations to Defra in the English Seabird Conservation and Recovery Plan.

Annex 3 - Natural England's Interim Guidance on Collision Risk Modelling Avoidance Rates

This is a Natural England interim update to the current guidance on collision risk modelling (CRM) (SNCBs, 2014) summarising key changes to advice and parameter values relating to CRM. This guidance precedes the release of updated joint SNCB guidance, which is due to be released later this year. Users should be aware that as the joint SNCB guidance note has not yet been finalised there is a risk that these values may be subject to change, however Natural England consider this risk sufficiently low to issue these draft parameters to provide developers who are close to submission/examination the option of utilising this advice.

Natural England commissioned the BTO (British Trust for Ornithology) to undertake an update of Cook et al (2014), combining evidence from the sites presented in Cook et al. (2014) and any additional sites with available appropriate data (including the ORJIP offshore collision work (Skov et al 2018) to provide avoidance rates based on data across a range of sites (Cook 2021). MacArthur Green undertook a critical review of Cook 2021, which included concerns regarding the influence of one dataset on overall avoidance rates. In response to these concerns, JNCC commissioned a further review and sensitivity analysis (Ozsanlav-Harris et al in prep).

The key changes proposed within the emerging SNCB guidance are as follows:

- Support the use of the stochastic CRM (sCRM, McGregor et al 2018)
- The avoidance rates (ARs) have been updated following the review of the latest evidence base (Cook 2021) and re-analysis (Ozsanlev-Harris et al, in prep).
- The Extended Band model is no longer recommended for any species (i.e. Options 3 and 4)
- All ARs are taken from Ozsanlev-Harris et al (in prep) and are not species specific, instead species groups have been used; large gulls, all gulls, small gulls and all gulls and terns (see Table 1)
- There are some changes to the recommended nocturnal activity factors (see Tables 2 and 3)

The suggested approach to gannet modelling is a novel methodology, which aims to account for three issues: firstly that all ARs calculated (by Ozsanlev-Harries et al, in prep, Cook 2021, Cook 2014) are 'within-windfarm' avoidance rates, secondly, there is not a gannet specific AR and thirdly that there is a clear evidence base that gannets display macro-avoidance. The methodology thus requires the reduction of density of birds in flight by an agreed macro-avoidance rate as an input to the CRM, followed by using an 'all gulls' AR within the CRM. An evidence report has been commissioned by Natural England to inform this rate using best available evidence. Until this is available, we suggest reducing the density of gannet in flight going into the CRM, either by a representative range of macro-avoidance rates of between 65% - 85% or by selecting a single rate of 70%

Table 1 - Recommended Avoidance Rates (AR) for Collision Risk Modelling taken from Ozsanlev-Harris et al (in Prep)

Species	**Basic Band (2012) Model AR**	**Basic sCRM AR**
Northern gannet* **Black-legged Kittiwake** (All gulls rate)	0.992	0.993 (±0.0003)
Lesser Black-backed Gull **Herring Gull** **Great Black-backed Gull** (large gulls rate)	0.994	0.994 (±0.0004)
Common Gull, Black-headed Gull (small gulls rate)	0.995	0.995 (±0.0002)
Sandwich tern (and all other marine species) (All gulls and terns rate)	0.990	0.991 0.0004)

* Macro-avoidance to be accounted for by a reduction of density of birds in flight based on the level of macro-avoidance displayed by this species. A project has been commissioned by Natural England to inform this rate, in the interim NE advise the use of a range of macro avoidance rates between 65% - 85% or a single rate of 70%.

Table 2 – SNCB recommended parameters for the Basic Band model – Option 1 or 2 (Band 2012)

Species	**AR**	**Flight Speed (m/s)** [1]	**NAF**[2]	**Body length (m)** [3]	**Wingspan (m)**[4]	**Flight Type**	**% of flights upwind**
Northern gannet* (All gulls rate)	0.992	14.9	8 % 1.32	0.94	1.72	Flapping	50
Black-legged Kittiwake (All gulls rate)	0.992	13.1	25-50% 2-3	0.39	1.08	Flapping	50
Lesser Black-backed Gull (Large Gulls rate)	0.994	13.1	25-50% 2-3	0.58	1.42	Flapping	50
Herring gull (Large Gulls rate)	0.994	12.8	25-50% 2-3	0.6)	1.44	Flapping	50
Great Black-backed Gull (Large Gulls rate)	0.994	13.7	25-50% 2-3	0.71	1.58	Flapping	50
Sandwich tern (All gulls and terns rate)	0.990	10.3	Defer to Garthe and Hüppop (2004) or where empirical data is available consult SNCB	0.38	1	Flapping	50
Common gull, Black-headed gull (small gulls rate)	0.995	Consult SNCB		Consult SNCB	Consult SNCB	Flapping	50
Other marine species (All gulls and terns rate)	0.990	Consult SNCB		Consult SNCB	Consult SNCB	Consult SNCB	Consult SNCB

* See note above in Table 1 regarding macro-avoidance

[1] All flight speeds from Alerstam (1997) except for Gannet from Pennycuick (1987) and Sandwich Tern from Fijn and Gyimesi (2018)
[2]All based on Garthe & Hüppop (2004) other than Gannet which is from Furness et al (2018)
[3] All named species from Snow & Perrins (1987)
[4] All named species from Snow & Perrins (1987)

Table 3 – SNCB recommended summary data for the stochastic CRM model (McGregor et al 2018)

Species	AR	Flight Speed (m/s) [1]	NAF[2]	Body length(m) [3]	Wingspan (m)[4]	Flight Type	% of flights upwind
Northern gannet* (All gulls rate)	0.993 (±0.0003)	14.9 (0)	0.08 +-0.10 •	0.94 (0.0325)	1.72 (0.0375)	Flapping	50
Black-legged Kittiwake (All gulls rate)	0.993 (±0.0003)	13.1 (0.40)	Use central value 0.375 and SD of (0.0637) that results in 0.25 and 0.5 being captured in the 95% CI	0.39 (0.005)	1.08 (0.0625)	Flapping	50
Lesser Black-backed Gull (Large Gulls rate)	0.994 (±0.0004)	13.1 (1.90)		0.58 (0.03)	1.42 (0.0375)	Flapping	50
Herring gull (Large Gulls rate)	0.994 (±0.0004)	12.8 (1.80)		0.6 (0.0225)	1.44 (0.03)	Flapping	50
Great Black-backed Gull (Large Gulls rate)	0.994 (±0.0004)	13.7 (1.20)		0.71 (0.035)	1.58 (0.0375)	Flapping	50
Sandwich tern (All gulls and terns rate)	0.991 (±0.0004)	10.3 (3.4)	Defer to Garthe and Hüppop (2004) or where empirical data is available consult SNCB	0.38 (0.005)	1 (0.04)	Flapping	50
Common Gull, Black-headed Gull (small gulls rate)	0.995 (±0.0002)	Consult SNCB		Consult SNCB	Consult SNCB	Flapping	50
Other marine species • (All gulls and terns rate)	0.991 (±0.0004)	Consult SNCB		Consult SNCB	Consult SNCB	Consult SNCB	Consult SNCB

* See note above in Table 1 regarding macro-avoidance

[1] All flight speeds from Alerstam (1997) except for Gannet from Pennycuick (1987) and Sandwich Tern from Fijn and Gyimesi (2018)
[2]All based on Garthe & Hüppop (2004) other than Gannet which is from Furness et al (2018)
[3] All named species from Snow & Perrins (1987)
[4] All named species from Snow & Perrins (1987)

References:

Alerstam T, Rosen M, Backman J, Ericson PGP, Hellgren O. 2007. Flight speeds among bird species: Allometric and phylogenetic effects. PLoS Biol 5(8): e197. doi:10.1371/journal.pbio.0050197

Band, B. (2012). Using a Collision Risk Model to Assess Bird Collision Risks for Offshore Wind Farms. Report by British Trust for Ornithology (BTO). Report for The Crown Estate.

Fijn, R.C., Gyimesi, A., 2018. Behaviour related flight speeds of Sandwich Terns and their implications for wind farm collision rate modelling and impact assessment. Environmental Impact Assessment Review 71, 12–16. https://doi.org/10.1016/j.eiar.2018.03.007

Furness, R. W., Garthe, S., Trinder, M., Matthiopoulos, J. , Wanless, S. and Jeglinski, J. (2018) Nocturnal flight activity of northern gannets Morus bassanus and implications for modelling collision risk at offshore wind farms. Environmental Impact Assessment Review, 73, pp. 1-6. (doi: 10.1016/j.eiar.2018.06.006)

Garthe S, Huppop, O.2004. Scaling possible adverse effects of marine wind farms on seabirds: developing and applying a vulnerability index. Journal of Applied Ecology 41: 724–734, 2004.
SNCB (2014) Joint Response from the Statutory Nature Conservation Bodies to Marine Scotland Science Avoidance Rate Review, 2014

McGregor, R.; King, S.; Donovan, C.; Caneco, B.; Webb, A. (2018). A Stochastic Collision Risk Model for Seabirds in Flight (Report No. HC0010-400-001). Report by Marine Scotland Science.

Ozsanlav-Harris, L, Inger, R & Sherley R. (in prep). Review of data used to calculate avoidance rates for collision risk modelling of seabirds. JNCC Report No. X (Research & review report), JNCC, Peterborough, ISSN 0963-8091.

Pennycuick, C.J. 1997. Actual and optimum flight speeds: field data reassessed. The Journal of Experimental Biology 200, 2355–2361
Skov, H. et al., 2018. ORJIP Bird Collision and Avoidance Study. Final report - April 2018.

Snow, D.W., & Perrins, C. M. (eds.) 1998. The Birds of the Western Palearctic. Concise edition.Vol. 1. OUP, Oxford.

Natural England

Follow up representation – 05 June 2023

Date: 05 June 2023
Our ref: 436335

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BY EMAIL ONLY

Dear Debbie

Request for scoping opinion for proposed Section 36 and Marine Licence Application for the Ossian Offshore Wind Farm locates approximately 80km south-east from the Aberdeenshire coast - Follow up Consultation - SCOP-0023 – Ossian Offshore Wind Farm Limited

Thank you for your email dated 16 May 2023 which requested further advice with regard to the NatureScot response the consultation on the HRA screening report. NatureScot provided advice to screen out of the Habitats Regulations Appraisal (HRA) Stage 1 Likely Significant Effect (LSE) Screening Report, all 4 of the 5 UK European Sites designated for Annex II marine mammals, including all sites with an interest in English waters (Berwickshire and North Northumberland Coast Special Area of Conservation (BNNC SAC) in respect of grey seal and the Southern North Sea SAC (SNS SAC) in respect of harbour porpoise).

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). We have delegated responsibility from JNCC to also advise on offshore wind farms (OWF's) in all English waters out to 200 nautical miles or the median line. Due to our remit, we restrict our comments to impacts to species from English Marine Protected Areas and to species in English waters.

Due to our remit, we have limited our advice to designations in English waters specifically the BNNC SAC and the SNS SAC. We defer to NatureScot and JNCC for advice on Scottish matters.

Summary Advice

Natural England cannot agree with the advice provided by NatureScot with regard to scoping the BNNC SAC and the SNS SAC out of the Habitats Regulations Appraisal (HRA) Stage 1 LSE Screening Report.

It is therefore our advice that the BNNC SAC and SNS SAC are retained at the screening stage and taken forward to Appropriate Assessment (AA).

While it is likely that Adverse Effect on Site Integrity (AEoSI) will be ruled out at the AA stage, we advise that these designations are screened in at the LSE stage, as potential impact pathways exist, given the mobile nature of the species considered, the potential foraging ranges of grey seals from the BNNC SAC and, that the North Sea Management Unit (MU) for harbour porpoise encompasses both the proposed Ossian OWF array area and the SNS SAC.

Further detailed advice is provided below.

Berwickshire and North Northumberland Coast SAC (Grey Seal - *Halichoerus grypus*)

It is Natural England's conclusion that a potential impact pathway exists between the proposed Ossian OWF array area and the BNCC SAC for grey seals. The SAC straddles Scottish and English waters. The Farne Islands, in English waters, supports the largest grey seal colony in the SAC.

Evidence to support this is provided in paragraph 166 of the Habitats Regulations Appraisal (HRA) Stage 1 LSE Screening Report.

"Grey seal were observed year-round during the first year of the site-specific aerial surveys for the site boundary, with a total of 26 individuals recorded over ten sightings. Telemetry data from tagged individuals also shows overlap between grey seal movement from coastal sites along the northeast coast of the UK and the site boundary, however activity is higher further inshore (Figure 5.1; Sinclair, 2021). These data also suggest connectivity between the site boundary and the Isle of May SAC and the Berwickshire and North Northumberland Coast SAC (Sinclair, 2021)."

Given this and other evidence regarding grey seal foraging ranges, it is Natural England's advice that there is an LSE alone on the BNNC SAC, and therefore it should not be screened out of further assessment.

Southern North Sea SAC (Harbour Porpoise - *Phocoena phocoena*)

The Southern North Sea SAC lies wholly in English waters. It is Natural England's conclusion that a potential impact pathway exists between the proposed Ossian OWF array area and the SNS SAC for harbour porpoise.

As noted in paragraph 160 of the Habitats Regulations Appraisal (HRA) Stage 1 LSE Screening Report, harbour porpoise were the most abundant marine mammal species recorded during the first year of the ongoing site-specific aerial surveys (March 2021 to February 2023), with 825 individuals reported between March 2021 to September 2022.

Harbour porpoise that form the SNS SAC population are encompassed by the wider North Sea Management unit, which encompasses both the SNS SAC and the Ossian OWF array area. Harbour porpoise are known to forage over wide ranges and as such have potential to travel between the SNS SAC and Ossian OWF array area. As noted in paragraph 161 of the Habitats Regulations Appraisal (HRA) Stage 1 LSE Screening Report, harbour porpoise from the Southern North Sea SAC have the potential to be present (i.e. foraging) both within the site boundary and the potential Zone of Influence (ZoI) of subsea noise due to piling.

Given this evidence it is Natural England's advice that there is an LSE alone on the SNS SAC, and therefore it should not be screened out of further assessment.

It should be noted that both of these sites where taken through to the AA stage for Berwick Bank OWF array area and that the Natural England advice presented here is consistent with that provided to other projects in English, Scottish and Welsh waters.

For any queries relating to the content of this letter please contact me using the details provided below.

Yours sincerely

Pete Welby

Northumbria Area Marine Team, Natural England
E-mail: Redacted

MOD Defence Infrastructure Organisation

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By email only

02 May 2023

Dear Iain,

REGULATION 12 OF THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 REGULATION 13 AND SCHEDULE 4 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2007 (collectively referred to as the "EIA Regulations").

Thank you for consulting the Ministry of Defence (MOD) on the above Scoping Opinion request in respect of the Ossian Offshore Wind Farm development. The consultation was received by this office on 16 March 2023. I write to confirm the safeguarding position of the MOD regarding information that should form part of any Environmental Statement submitted in support of an application.

This proposal seeks consent to develop the offshore components of the Ossian Array, which are the subject of this Array Environmental Impact Assessment (EIA) Scoping Report prepared by the applicant. As such, no details of cable routes, land fall or onshore have been provided or assessed.

The Array will be located approximately 80 km south-east of Aberdeen, Scotland and will comprise of the following infrastructure components: a maximum of 270 wind turbine generators (maximum blade tip height of 375 metres Lowest Astronomical Tide ((LAT)) and associated floating support structures and foundations, up to six offshore substation platforms (OSPs), moorings and anchoring systems, a network of dynamic/static inter-array cabling and connectors and ancillary elements such as scour protection and cable protection.

The EIA scoping report relates only to the offshore array and recognises some of the principal defence issues relevant to MOD consideration of the proposed development.

The use of airspace in the vicinity of the proposed development for defence purposes has been appropriately identified. The Scoping Report highlights some of the aviation and radar systems that may be affected by the proposed wind farm and the MOD is identified as a relevant receptor in Chapter 7.3 Aviation, Military and Communications of the Scoping Report.

The report identifies that the proposed turbines have the potential to affect and be detectable to Primary Surveillance Radars (PSR), both military and civilian systems, in the wider region. In paragraph 559 of the report it notes that the development has the potential to have an impact on the operation and capability of the Air

Defence Radars (ADR) at RAF Buchan and RAF Brizlee Wood. The impact on these radars should be considered in the preparation of any application for this scheme. The impact on radar systems may require technical mitigation(s) which would be provided by the applicant.

Impact on military activity has been recognised in Table 7.9 of the scoping report. The designated site area sits below a military Practice and Exercise Areas (PEXA). Although the applicant has not identified this PEXA in the scoping report, the MOD do not anticipate that the development would have any substantial impact though further assessment will take place when additional information is available.

The potential presence of unexploded ordnance (UXO) has been identified as a relevant consideration both in Section 2.4 Offshore construction phase and in Table 7.20 of the scoping report. The potential presence of UXO and disposal sites is also a relevant consideration to the installation of cables and other intrusive works that may be undertaken in the maritime environment.

In paragraph 560 of the scoping report the impact on military low flying has been scoped in, the applicant has identified that the array occupies Low Fly Area 14 (LFA 14). The applicant correctly identifies MOD as a consultee and identifies they are committed to lighting and charting the turbines. In the interests of air safety, the MOD would request that the development be fitted with MOD accredited aviation safety lighting in accordance with the Civil Aviation Authority, Air Navigation Order 2016.

In relation to the Onshore element of the proposed development, no information has been provided in this consultation. The MOD hope to be consulted to determine any impact on MOD assets.

I trust this is clear however should you have any questions please do not hesitate to contact me.

Yours sincerely

Redacted

Teena Oulaghan
Safeguarding Manager

Historic Environment Scotland

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

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Our case ID: 300064563
Your ref: SCOP-0023
04 May 2023

Dear Marine Scotland

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
SCOP-0023 - Ossian Offshore Wind Farm Limited - Ossian Offshore Wind Farm - 80km South-East from the Aberdeenshire coastline - Section 36 consent and marine licence - Scoping Opinion

Thank you for your consultation which we received on 16 March 2023 about the above scoping report. 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 (HMPAs), and for developments in off-shore waters, the undesignated historic environment.

Proposed Development
We understand that the proposed development comprises a wind farm of a maximum of 270 wind turbines, with associated offshore Substation Platforms (OSPs), cables, scour protection and cable protection. I note that this scoping request does not include the export cable corridor or the onshore elements of the works.

Scope of assessment
We note (para. 177) that there has been no pre-scoping engagement with HES. We feel that this is reflected in the scoping report, which does not refer (section 4.2) to legislation or guidance relating to the marine historic environment, though appropriate references are included in the bibliography.

The marine historic environment is discussed in chapter 7, Marine Archaeology, and the baseline data, based on a desk-based assessment, is presented at Appendix 11. The study area includes the development site boundary and a buffer of 2km around this in which the applicants suggest indirect impacts on archaeological remains may be possible. Within this area, geophysical survey has already taken place, but detailed results of the survey are not provided. The applicants indicate (para. 586) that a stand-alone Marine Archaeology Technical Report will be provided when the EIA Report is submitted.

The applicants state that it is unlikely that prehistoric archaeological remains survive in the study area (para. 586, & app. 11, paras. 287-9). Two wrecks were identified within the study area (para. 589), one of which has been entered into the National Record of the Historic Environment (Canmore id: 372595).

In response to the applicants' scoping questions:

- Do you agree with the marine archaeology study area as defined e.g. the site boundary and a wider search area encompassing 2 km from the limits of the site boundary?

Yes, we are content with the proposed marine archaeological study area. We note the intent to mitigate impacts on the historic environment and welcome this.

- Do you agree that the designed in measures described are suitable for managing and mitigating the potential effects of the site boundary on the marine archaeology receptors?

Insufficient detailed evidence is given in the scoping report to allow us to agree that the designed in measures are suitable for managing and mitigating potential effects of the development on the marine archaeology receptors. It is clear that there would be potential effects on marine archaeology, and as detailed assessment has not been provided to identify these effects and their significance, and as the proposed Marine Archaeology Technical Report has not yet been supplied, we cannot be confident that the effects would be managed and mitigated.

- Do you agree that it is appropriate to scope out those impacts proposed to be scoped out, and that the assessment of marine archaeology receptors should be scoped out of the Array EIA Report?

The scoping report notes that a Marine Archaeology Technical Report will be produced as a stand-alone document, separate to the EIAR, and suggests that all heritage can be scoped out of the EIA process at this point. We do not support this position. From the information contained within the scoping report, it is clear that there are potential impacts on marine archaeology, including wrecks identified during geophysical survey. The scoping report notes that further archaeological assessment is required, and we agree with the outline of this work and the contents required of the technical report as stated in the report. The additional archaeological assessment and its results have not yet been provided and therefore the historic environment cannot be scoped out of the EIA process. The proposed archaeological assessment, its results and the proposed mitigation measures should be presented within the Environmental Impact Assessment Report, to

allow the impacts and mitigation to be considered together with other environmental impacts, constraints and mitigation.

Given the distance to shore, we are content that onshore designated assets will not be affected by the offshore wind farm and impacts on their settings can therefore be scoped out. We note that the cable route and onshore elements for the proposed development will be considered under separate EIAs, and we would expect onshore historic environment assets to be considered for both of these, including impacts on setting.

Further information
Guidance about national policy can be found in our 'Managing Change in the Historic Environment' series available online at www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes. Technical advice is available on our Technical Conservation website at https://conservation.historic-scotland.gov.uk/.
We hope this is helpful. Please contact us if you have any questions about this response. The officer managing this case is Mary MacLeod Rivett and they can be contacted by phone on 0131 886 8710 or by email on mary.macleod@hes.scot

Yours faithfully

Historic Environment Scotland

NatureScot

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

Iain MacDonald

Marine Directorate – Marine Planning & Policy

By email: ms.marinerenewables@gov.scot

02 May 2023

Our ref: CNS/ REN/ OSWF/ OSSIAN E1 EAST – PRE-APPLICATION

Dear Iain

Ossian Offshore Wind Farm Array – ScotWind E1 East

NatureScot advice on the Environmental Impact Assessment (EIA) Scoping Report and Habitats Regulations Appraisal (HRA) Stage 1 Likely Significant Effects (LSE) Screening Report

Thank you for consulting NatureScot on the EIA Scoping Report and HRA Stage 1 LSE Screening Report submitted by Ossian Offshore Wind Farm Limited for the Ossian offshore wind farm array, and for agreeing to extend the response deadline.

Our advice on the natural heritage interests to be addressed within the Environmental Impact Assessment Report (EIA Report) and HRA is outlined below. Please note that the advice contained in this letter is in relation to the offshore array components only. We will provide advice on the export cable corridor components separately when details become available.

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 proposal is a lease awarded through the ScotWind process in an area identified through the Sectoral Marine Plan process for Offshore Wind.

Proposal

The proposal uses a project design envelope approach, as such we recommend recent Scottish Government guidance on this approach[1]. The proposal comprises of:

- Up to 270 wind turbine generators (WTGs) with a generating capacity yet to be defined;

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

- WTG foundations being considered are semi-submersible and/ or tension leg platform floating structures;
- A maximum blade tip height of 399m above MHWS and a minimum blade tip clearance of at least 22m above MHWS;
- Up to 6 Offshore Substation Platforms (OSPs) which are likely to have fixed foundations but may use floating foundations if appropriate technology is available;
- Up to 1,515km of inter-array cabling and interconnector cabling; and
- Ancillary elements such as cable protection and clump weights.

This proposal does not include infrastructure associated with the export of electricity (i.e. export cables, landfall and grid connection infrastructure), our understanding is that these elements will be considered separately due to the timescales and uncertainties associated with the Holistic Network Design Follow-Up Exercise[2].

Content of the Scoping Report

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

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.

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 key trophic levels particularly in relation to the availability of prey species. 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 seabird and marine mammal (and other top predator) interests and what influence this may have on population level impacts.

Wet storage

Wet storage could represent a very significant impact pathway with respect to floating wind. It is unclear from the scoping report if there are any plans for wet storage of assembled and/ or component parts of floating turbines in the construction, and operation and maintenance phases, and what this would entail or potential locations identified. Consideration of wet storage, including potential impacts on receptors, needs to be addressed with the forthcoming EIA Report and HRA.

Climate change and carbon costs

The impact of climate change effects should be considered, both in futureproofing the project design and how certain climate stressors may work in combination with potential effects from the

[2] Holistic Network Design Follow-Up Exercise

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 recognise that some aspects of this are addressed in section 5.5 (Climatic Effects).

Blue carbon

In addition to the climate change assessments mentioned in the EIA Scoping Report, we recommend that consideration is given to impacts on blue carbon and whether or not an assessment can be undertaken. Not just in in respect of the windfarm, but also in terms of any wet storage areas. This should expand on the information and assessment conducted for benthic ecology to focus on the potential impacts of the proposed development on marine sediments.

Habitats Regulations Appraisal

We welcome the submission of the EIA Scoping Report and HRA Stage 1 LSE Screening Report in a single package, and the opportunity to combine our advice under each assessment process into a single response. We provide HRA advice for marine ornithology, marine mammals, benthic subtidal ecology, fish and shellfish ecology in each of the relevant appendices below.

Positive Effects for Biodiversity/ Biodiversity Net Gain

We recommend early consideration of potential Positive Effects for Biodiversity as well as nature inclusive design aspects at an early stage and following through into the EIA Report. We acknowledge that, whilst not policy, these aspects form part of our ability to address both the climate and biodiversity crises and as such we encourage developers to consider this as part of their application.

Mitigation

We welcome the identification of 'Designed In Measures' described in each of the relevant sections of the EIA Scoping Report (for example Section 2.7) and summarised in Appendix 2. 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 proposed development. We advise that the full range of mitigation and monitoring measures, and published guidance, are considered and discussed in the EIA Report.

Natural Heritage interests to be considered

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

- Advice on offshore ornithology is provided in **Appendix A**.
- Advice on marine mammals is provided in **Appendix B**.
- Advice on seascape, landscape and visual impact assessment (SLVIA) is provided in **Appendix C**.
- Advice on benthic subtidal ecology is provided in **Appendix D**.
- Advice on fish and shellfish ecology is provided in **Appendix E**.
- Advice on physical processes is provided in **Appendix F**.
- Advice on subsea noise is provided in **Appendix G**.

We note there are some aspects of the scoping report where there is ambiguity and or lack of certainty on some of the impact assessment tools and techniques that will be deployed. This may be due to the novel nature of floating wind particularly at this distance and in these depths of waters. We have sought to identify within each Appendix where there is the need for further discussion to refine and agree assessment methods.

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 undertaking the EIA Report.

We note the submission of a draft Stakeholder Engagement Plan (Appendix 1). While we will continue to engage with the applicant in the post-Scoping and pre-application phase on specific technical topics which are not covered by published guidance, we do not envisage the need for a lengthy 'roadmap' process.

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

Malcolm Fraser

Marine Sustainability Adviser – Sustainable Coasts and Seas

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NatureScot advice on EIA Scoping Report and HRA Stage 1 LSE Screening Report for the Ossian Offshore Wind Farm

Appendix A – Offshore Ornithology

Introduction

Offshore ornithology is considered in section 6.4 of the EIA Scoping Report, and within sections 4.4 and 5.4 of the HRA Stage 1 LSE Screening Report. A series of scoping questions are raised in section 6.4.10 and we respond to these questions in our advice below. These are specific technical questions and, in this Appendix only, they are presented in text boxes to clearly identify them.

Our advice is based on our suite of Guidance Notes: *Guidance to Support Offshore Wind Applications: Marine Ornithology*[3].

In general, the proposed approach aligns with our guidance. However, some proposed approaches/ methods deviate, in particular we do not endorse the approach outlined for the density estimation and the displacement assessment, and advise that tools such as MRSea as well SeabORD are used wherever possible.

Key species

Results from the first year of site-specific digital aerial surveys (DAS) show that the following species are most abundant in the region: northern gannet, black-legged kittiwake, common guillemot, razorbill, northern fulmar and Atlantic puffin, as per Table 6.15 in section 6.4.3. The following species were also detected during the first year of surveys herring gull, lesser black-backed gull, great black-backed gull, common gull, little gull, great skua, Arctic tern, common tern, little auk, Manx shearwater and widgeon.

While the EIA Scoping Report identifies a number of key species likely to require assessment, we would expect this to be informed by the full 24-month DAS campaign.

Also, with regard to Table 6.15 (section 6.4.3) further explanation is required to explain how the standard deviations have been calculated as this is not clear.

Study area

We are content with the study area as proposed in section 6.4.2 and Figure 6.6. This is defined by the array site boundary plus an 8km buffer, as used in the site-specific DAS campaign.

Baseline characterisation and approach to assessment

Do you agree that the data which will be available following completion of the site-specific baseline aerial surveys will be sufficient to describe the offshore ornithology baseline for purposes of undertaking the Array EIA Report?

The methodology laid out in the EIA Scoping Report aligns with what we would expect to see in order to undertake a full assessment, based on a 24-month DAS campaign, which we note from section 6.4.2 commenced in March 2021 and was completed in February 2023. We have not yet

[3] https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/renewable-energy/marine-renewables/advice-marine-renewables-development

had sight of the Year 1 interim report or full baseline characterisation report and refer the applicant to our Guidance Note 2[4] on this. It would be helpful to understand whether any gaps in survey coverage has necessitated re-allocation and if so how this has been dealt with.

Does the proposed assessment approach adequately capture the requirements expected by NatureScot for such an assessment? Specifically, do you agree that the approaches outlined for density estimation, seabird populations and apportioning, displacement and barrier effect assessment, collision estimation, PVA and CEA are appropriate? Do the stakeholders have any suggestions for key changes that may be required to the approaches outlined by this chapter?

Density estimation

As per our Guidance Note 2, our preference is that MRSea should be used for density modelling and note as per section 6.4.7 that design-based methods are proposed instead. This aspect should be discussed further once the baseline characterisation report is available so agreement can be reached as to the best method for this wind farm based on the availability of species-specific data.

Seasonal definitions

It is acceptable at this stage to present breeding seasons as laid out in Table 6.15, however, going forward we would expect seasons as defined in our guidance note *Seasonal Periods for Birds in the Scottish Marine Environment*[5] to be used.

Seabird foraging ranges, populations and apportioning

The proposed approach for connectivity is to use the foraging ranges (mean max +1SD) as defined in Woodward et al (2019)[6], which is in line with our advice for most species, however, there are a few exceptions to this that have not been considered within the EIA Scoping Report. There are specific exceptions in place for gannet, guillemot and razorbill, these can be found in our Guidance Note 3[7].

Section 6.4.7 notes that the Seabird Monitoring Programme (SMP) will be used to derive the latest populations for all Scottish sites in line with Guidance Note 5[8]. Please note that the national gannet census was completed during 2013-2014 and this is the time-period that should be used for gannet. The assessment should clearly show which survey year(s) are included when SMP data is being used.

[4] Guidance Note 2: Guidance to support Offshore Wind Applications: Advice for Marine Ornithology Baseline Characterisation Surveys and Reporting
[5] Seasonal Periods for Birds in the Scottish Marine Environment
[6] Woodward, I., Thaxter, C.B., Owen, E. and Cook, A.S.C.P. (2019). *Desk-based revision of seabird foraging ranges used for HRA screening*. BTO research Report No. 724.
[7] Guidance Note 3: Guidance to support Offshore Wind applications: Marine Birds - Identifying theoretical connectivity with breeding site Special Protection Areas using breeding season foraging ranges
[8] Guidance Note 5: Guidance to support Offshore Wind Applications: Recommendations for marine bird population estimates

For non-breeding populations, we support the use of Furness (2015)[9] which is in line with our guidance. However, as is highlighted in paragraph 458, guillemot and herring gull do not disperse as widely as other species outside the breeding season, this was shown for guillemot in the recent study by Buckingham et al. (2022)[10]. Therefore, for guillemot we advise the non-breeding season population comprises the breeding population found within the MMFR+1SD (mean max foraging range plus 1 standard deviation) of the development + age classes, as per our Guidance Note 4[11].

For herring gull we advise that the regional breeding population found within the MMFR+1SD with a correction factor is used as the non-breeding population. A correction factor should be applied to account for the influx of continental breeding birds into eastern Scotland during the non-breeding season. The correction factor should be calculated from the proportions of overseas and western UK birds in the UK North Sea and Channel BDMPS (Furness, 2015).

Further information can be found in our guidance in relation to seabird foraging ranges, populations and apportioning please refer to Guidance Notes 4, 5 and 9[12].

Please note that this suite of guidance is written prior to the completion of the Seabirds Count Census and in the middle of the ongoing Highly Pathogenic Avian Influenza mortality event (which is likely to affect the relevance of population counts prior to 2022). Therefore, this should be considered interim guidance. We will update our guidance suite once the census has been published and will provide updates and guidance on HPAI as they become available.

Distributional responses (displacement and barrier effect)

The matrix-based approach is proposed for all species even where SeabORD is available and relevant. This is not in line with our Guidance Note 8[13]. Instead, we would expect SeabORD to be used for puffin, guillemot, razorbill and kittiwake during the chick-rearing period and that the matrix-based model is used for all other species, and for puffin, guillemot, razorbill and kittiwake outside of the chick-rearing period. Guidance Note 8 details current displacement and mortality rates.

Collision risk modelling

The proposed approach is to use the McGregor et al (2018)[14] stochastic collision risk model which is in line with our guidance. We advise the use of the 2022 update to the sCRM tool shiny app (Caneco 2022). This update should also be used to run deterministic output, with seed values

[9] Furness, R. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Report 164.

[10] Buckingham, L., Bogdanova, M.I., Green, J.A., Dunn, R.E., Wanless, S., Bennett, S., Bevan, R.M., Call, A., Canham, M., Corse, C.J. and Harris, M.P., 2022. Interspecific variation in non-breeding aggregation: a multi-colony tracking study of two sympatric seabirds. Marine Ecology Progress Series, 684, pp.181-197.

[11] Guidance Note 4: Guidance to Support Offshore Wind Applications: Ornithology - Determining Connectivity of Marine Birds with Marine Special Protection Areas and Breeding Seabirds from Colony SPAs in the Non-Breeding Season

[12] Guidance Note 9: Guidance to support Offshore Wind applications: Marine Ornithology Advice for Seasonal Definitions for Birds in the Scottish Marine Environment

[13] Guidance Note 8: Guidance to support Offshore Wind applications: Marine Ornithology Advice for assessing the distributional responses, displacement and barrier effects of Marine birds

[14] McGregor, R.M., King, S., Donovan, C.R., Caneco, B. and Webb, A. (2018). A Stochastic Collision Risk Model for Seabirds in Flight. Marine Scotland.

specified to enable repeatability. We require that outputs for both stochastic and deterministic CRM are presented using this tool. The EIA Scoping Report states that for all species Option 2 will be applied using generic flight height distributions from "Corrigendum," 2014[15] and Johnston et al. (2014)[16], and that where applicable Band option 3 will be run for species with available avoidance rates, this is in line with our guidance.

Site-specific flight height data is not proposed for CRM. Johnston et al. (2014) currently remains the recommended reference for generic flight heights and is the default within the sCRM tool, and as per our guidance, we expect this to be used in the assessment.

An updated review of migratory routes and vulnerabilities across the UK is currently being prepared on behalf of Marine Directorate. This work also includes development of a stochastic migration CRM tool (known as mCRM) to enable quantitative assessment of risks to migratory SPA species including swans, geese, divers, seaduck and raptors. The updated review and its associated mCRM tool should be available imminently and should be used in the forthcoming assessment.

At the time of writing, we advise that collision impacts and distributional response impacts should be additive. This reflects the best publicly available evidence for considering species such as gannet and kittiwake which are susceptible to both impacts. We are aware of work being undertaken by Natural England on this topic, and NatureScot will review its position on this following publication.

The species parameters presented in Table 6.20 (section 6.4.7) align with our CRM Guidance Note 7[17] but we note that the reference cited differs from the sources cited in our guidance. NatureScot's assessment will be based upon the flight speeds taken from Pennycuick (1997)[18] and Alerstam et al. (2007)[19]. Flight type for gannet should be set as gliding, not flapping as is incorrectly presented in Table 6.20.

In terms of nocturnal activity, we would expect as per our guidance that Garthe and Hüppop (2004)[20] be used for all species other than gannet which should use Furness et al. (2018) as stated in the EIA Scoping Report.

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[15] Corrigendum (2014). Journal of Applied Ecology 51, 1126–1130. Available at: https://doi.org/10.1111/1365-2664.12260. Accessed on: 25 January 2023.

[16] Johnston, A., Cook, A.S.C.P., Wright, L.J., Humphreys, E.M. and Burton, N.H.K. (2014). Modelling flight heights of marine birds to more accurately assess collision risk with offshore wind turbines. Journal of Applied Ecology 51, 31–41. Available at: https://doi.org/10.1111/1365-2664.12191. Accessed on: 25 January 2023.

[17] Guidance Note 7: Guidance to support Offshore Wind Applications: Marine Ornithology - Advice for assessing collision risk of marine birds

[18] Pennycuick, C. (1997). Actual and 'optimum' flight speeds: field data reassessed. Journal of Experimental Biology. 200(17): 2355-2361

[19] Alerstam, T., Rosén, M., Bäckman, J., Ericson, P.G.P., Hellgren, O. (2007) Flight Speeds among Bird Species: Allometric and Phylogenetic Effects. PLOS Biol. 5(8): e197.

[20] Garthe, S. and Hüppop, O. (2004) Scaling Possible Adverse Effects of Marine Wind Farms on Seabirds: Developing and Applying a Vulnerability Index. Journal of Applied Ecology. 41(4): 724-734.

We are aware of the recently published JNCC report on review of data used to calculate avoidance rates for collision risk modelling of seabirds as per Ozsanlav-Harris et al. (2023)[21] – we will publish our position with respect to this paper shortly.

We are also aware that a Natural England report on nocturnal avoidance rates has just been published. NatureScot are currently reviewing this and will update our guidance if needed. We aim to issue comments on the Natural England report to all ScotWind developers in the near future.

Population viability modelling (PVA)

The proposed approach is to run PVAs over a 50-year period. As per our guidance we require that the modelling of impacts is undertaken over two or three time periods:

- 25 years (and the intended lease period if different)
- 50 years

The proposed approach is to use the Natural England PVA Tool (Searle et al. 2019) which aligns with our guidance. The EIA Scoping Report also states that *'The PVA will focus on birds where the assessed mortality exceeds a 0.02 percentage point change to adult annual survival rates…'* we agree with this percentage point threshold and expect this to be used. Further information in relation to this can be found in our Guidance Note 11[22].

The assessment will use generic mortality rates as per Horswill and Robinson (2015)[23], which aligns with our advice in Guidance note 11. It also proposes to use '*other sources considered most appropriate to the populations being modelled (e.g. as derived from long-term monitoring data on the Isle of May – see DMP Stats and HiDef Aerial Surveying Ltd., 2022)'* – use of alternative or additional resources should be fully justified and explained in the EIA Report.

Our advice is that the assessment should model site- and species-specific impacts within the PVA, rather than any generic scenarios. As per our Guidance Note 11 we request the presentation of both the counterfactual for population size (CPS) and counterfactual for growth rate (annualised) (CGR).

Potential impacts

We are content that the standard impact pathways of disturbance, distribution responses, and collision have all been scoped into assessment, as well as habitat loss, UXO clearance, changes to prey availability and entanglement (Table 6.16).

Cumulative impacts

We are broadly content with the proposed approach to cumulative assessment described in section 6.4.8. including use of the Cumulative Effects Framework (CEF) which we understand will be available shortly.

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[21]Ozsanlav-Harris, L., Inger, R. & Sherley, R. 2023. Review of data used to calculate avoidance rates for collision risk modelling of seabirds. JNCC Report 732, JNCC, Peterborough, ISSN 0963-8091.

[22] Guidance Note 11: Guidance to support Offshore Wind Applications: Marine Ornithology - Recommendations for Seabird Population Viability Analysis (PVA)

[23] Horswill, C. & Robinson R. A. (2015). Review of seabird demographic rates and density dependence. JNCC Report No. 552. Joint Nature Conservation Committee, Peterborough.

We recently concluded that the Berwick Bank application would have an adverse effect on site integrity (AEoSI) on multiple seabird species within The UK European Site Network, some of which overlap with the species and sites likely to require assessment for this application. Due to this conclusion and the unknown outcome of the Berwick Bank application at present, we anticipate that multiple PVA models should be run, with and without Berwick Bank.

Cumulative assessment should be further discussed with Marine Directorate and NatureScot to ensure that both the worst case and realistic worst case are both taken forward into a cumulative assessment.

Mitigation and monitoring

We welcome the designed in measures described in section 6.4.4. We advise that the full range of mitigation measures and published guidance is considered and discussed in the EIA Report.

No specific monitoring for offshore ornithology is mentioned in the Mitigation and Monitoring Commitments Register in the EIA Scoping Report (Appendix 2). Further information on proposed ornithological monitoring should be discussed in the EIA Report.

Do you agree that the approach proposed in relation to designed in measures described provides a suitable means for managing and mitigating the potential effects of the Array on the offshore ornithology receptors?

The proposed designed in measures seem appropriate, but we would expect these to be kept under review as the assessment and development progresses. We note that the applicant should differentiate between mitigation measures and any compensation measures if a derogation case is required.

Ongoing consultation

Can stakeholders confirm agreement with the proposed need for further discussion and consultation on issues and information that emerge from the ongoing HPAI outbreak in seabird populations, and can this be confirmed by the Scoping Opinion? Can stakeholders confirm agreement with the need for consultation to extend beyond the Scoping Opinion? As a minimum, it is considered that this is likely to be required in relation to: - The implications from the HPAI outbreak, as detailed above, including the need to identify and agree upon a suitable approach to incorporation of the HPAI impacts within the assessment (which could potentially involve access to, and analysis of, any colony count data which are collected in 2023); - Ensuring continued engagement on approach to CRM and the details of the input parameters to be used; - Ensuring continued engagement on the approach to PVA and details of the demographic input parameters, population modelling and focus, as well as any species-specific variation in the threshold levels for instigating PVA; and - Addressing the need for consultation on any currently unpublished guidance and modelling tools which may emerge after receipt of the Scoping Opinion.

As noted in the covering letter, we will continue to engage on specific technical topics which are not covered by published guidance. We acknowledge the requirement for continued engagement on the impacts of HPAI and how to incorporate these impacts within the assessment, and on unpublished guidance and modelling tools which may emerge after receipt of the Scoping Opinion. We will continue to engage around CRM and PVA, however, we expect the approach to assessment to align with our Guidance notes 7 and 11.

Transboundary impacts

We note the proposed approach to Transboundary impacts set out in section 6.4.9 and Appendix 3, and the conclusion that transboundary impacts may arise during non-breeding season. We recommend further discussion on this topic with Marine Directorate and NatureScot following submission of the final baseline report.

Habitats Regulations Appraisal (HRA) Stage 1 LSE Screening Report

Summary

In general, those sites highlighted within the HRA Stage 1 LSE Screening Report with potential connectivity, together with the generic impact pathways are as expected. However, there are several issues that must be addressed in the assessment, as outlined below.

Connectivity and identification of key sites for breeding seabirds

The HRA Stage 1 LSE Screening Report states that the mean maximum plus 1 S.D. foraging ranges from Woodward et al (2019) were used to calculate connectivity, which is correct for most species however there are exceptions. As highlighted in our Guidance Note 3[24] we advise on these exceptions for gannet, guillemot and razorbill. In reviewing Table 4.3 (Mean Maximum Foraging Ranges of Breeding Seabirds (from Woodward et al., 2019)) we have noticed several discrepancies that deviate from our guidance. These relate to: common tern, guillemot and razorbill. The common tern figure may be an error, and the figures for guillemot and razorbill will differ depending on whether Fair Isle data is included or not.

In light of these discrepancies, Table 4.4 (European Sites Designated for Marine Ornithological Features with Potential Connectivity to the Array) should also be reviewed to ensure that all connectivity distances are correct. From our own review of Table 4.4 we note that qualifying features are missing for St Abb's Head to Fast Castle SPA, North Rona and Sula Sgeir SPA, Ythan Estuary, Sands of Forvie and Meikle Loch SPA, Firth of Tay and Eden Estuary SPA as well as Firth of Forth SPA.

Likely Significant Effect

The approach undertaken in the HRA Stage 1 LSE Screening Report seems appropriate for LSE screening, however, no conclusions on LSE should be made until the second year of data is available so that a full picture of how birds are interacting with the array footprint is understood. For example, we do not agree that great skua should be screened out at this stage without consideration of the second year of data.

[24] Guidance Note 3: Guidance to support Offshore Wind applications: Marine Birds - Identifying theoretical connectivity with breeding site Special Protection Areas using breeding season foraging ranges

Consideration also needs to be given to associated works, such as construction and/ or O&M vessel traffic, before LSE can be ruled out. For example the Outer Firth of Forth and St Andrews Bay Complex SPA has been screened out in section 4 based on its location, approximately 80km from the array area. However, depending on the location of construction/ assembly ports and or the O&M base, which are unknown at this stage, there is potential for disturbance impacts from vessels transiting through this European site during the construction and/ or O&M phases of this wind farm project. We therefore recommend that this marine SPA is kept in until such times that these elements of the project development are better understood.

Table 4.7 (The SPAs and Ramsar Sites Taken Forward for Determination of LSE, with Details of the Associated Qualifying Features) and each of the associated LSE matrix tables (Table 5.4: LSE Matrix – Table 5.49: LSE Matrix) should be reviewed by the applicant to ensure consistency from Table 4.4 (as per advice above) so that no qualifying features have been missed. Please note there are colour coding mistakes in LSE Tables 5.11 and 5.12. Table 6.1 (Summary of European Sites and Relevant Qualifying Features for which Potential LSEs have Been Identified and Screened in for Further Assessment in the RIAA) will also require revision.

Construction Phase

No species should be scoped out of assessment at this stage as the second year of baseline data has not been included in the conclusions presented. It is important that all aspects of the development are considered, including associated works and activities, e.g. wet storage locations or vessel movements associated with construction.

We therefore require assessment of any associated vessel movements, taking account of proximity and timing of any disturbing activities. Noting that vessel routes may go through or be in close proximity to designated sites. We expect explicit consideration of reducing disturbance to marine birds. Mitigation methods may help to reduce these impacts; for example avoiding sensitive times of the annual cycle, avoiding any aggregations of birds on the water and following good practice using principles from the Scottish Marine Wildlife Watching Code[25].

Operation and maintenance phase

No species should be scoped out of assessment at this stage as the second year of baseline data has not been included in the conclusions presented. If the assessment concludes that LSE arise on a species via disturbance and displacement, then that species should be assessed across both breeding and non-breeding periods, as opposed to a single period.

Offshore wind developments may have indirect impacts on marine birds by affecting prey availability. Impacts to key prey species and their habitats within the wind farm are to be considered across all development phases, alone and in combination with other wind farms in the development area, particularly in areas of importance for foraging seabirds (Wakefield et al. 2017). Breeding density, fine-scale tracking, and large-scale modelling can reveal the regional distribution of our seabird species which is likely to provide useful context.

We recognise most EIA Reports concentrate on receptor-specific impacts, however increasingly we need to understand impacts at the ecosystem scale, and on predator/prey interactions.

[25] https://www.nature.scot/professional-advice/land-and-sea-management/managing-coasts-and-seas/scottish-marine-wildlife-watching-code

Consideration across key trophic levels will enable better understanding of the consequences (positive or negative) of any potential changes in prey distribution and abundance on ornithological interests, and how this may influence population level impacts. Drivers of change could include habitat loss and potential changes to trophic interactions and community structure and function, including prey species compositional changes e.g., changing from those dependant on sandy substrates to those species favouring rocky substrates.

Consideration of these issues can be included in chapters assessing impacts on benthic interests and fish/ shellfish, however we advise that a summary of this is included within the ornithology chapter and that clear links and references be made between the receptor chapters. We also strongly recommend the use of hyperlinks to connect associated assessments for ease of navigating.

The impact of lighting fitted to the array needs to be considered, particularly in respect to nocturnal species, this could be done in a qualitative manner but it needs to be addressed.

Decommissioning Phase

No species should be scoped out of assessment at this stage as the second year of baseline data has not been included in the conclusions presented. As per our advice on the construction phase it is important that all aspects of the development are considered, including associated works and activities, e.g. wet storage locations or vessel movements associated with construction.

In-combination

Within each of the migratory LSE Tables for geese and migratory water bird qualifying features, collision and barrier to movement has been screened in for the operation and maintenance phase only. We note that in-combination effects have also been screened out for the construction and decommissioning phases and request further explanation as to the reasoning for this.

NatureScot advice on EIA Scoping Report and HRA Stage 1 LSE Screening Report for the Ossian Offshore Wind Farm

Appendix B – Marine Mammals

Marine mammals are considered in EIA Scoping Report section 6.3 and Appendix 9, with links to sections 5.2 (Subsea Noise) and 6.2 (Fish and Shellfish Ecology). They are also considered in HRA Stage 1 LSE Screening Report sections 4.3 and 5.3. The scoping questions to consultees set out in section 6.3.11 are answered in our advice below.

Study area

The proposed approach is to define two study areas, as described in section 6.3.2 and Figure 6.4, which are:

- Array marine mammal study area – defined by the array site boundary plus an 8km buffer as used in the site-specific digital aerial survey campaign; and
- Regional marine mammal study area – a much wider area of the North Sea, defined by relevant species Management Units (MUs), including:
    - Celtic and Greater North Sea MU;
    - North Sea MU; and
    - SCANS-III block R.

We agree that these are appropriate study areas for the marine mammal assessment.

Baseline characterisation

We support the proposed approach of carrying out a desk-based review of existing marine mammal data, focusing on sourcing data that has been collected within or near to the study area. We support the list of existing datasets as described in Appendix 9, Apx Table 9.1. This has been supplemented by site-specific monthly digital aerial surveys (DAS), and note that interim DAS results have been included in this baseline characterisation.

Approximately 5% of all DAS marine mammal sightings were recorded as unidentified marine mammals. We advise against apportioning these to the most abundant identified species / groups, as this introduces bias in the DAS results.

Consideration is needed as to whether density estimates from site-specific surveys, or those derived from publicly available density estimates (eg. SCANS/ Waggit 2020)[26] are used in the assessment. Our position is to use whichever is the highest density estimate for each species.

Potential impacts

Table 6.13 summarises the impacts to be scoped into the marine mammal assessment, and Table 6.14 the impacts proposed to be scoped out of assessment. We broadly support the proposed approach, however we do not support scoping out of EMF from subsea electrical cabling during the operation and maintenance phase and we advise that it is scoped into assessment.

[26] Waggitt, J.J., Evans, P.G., Andrade, J., Banks, A.N., Boisseau, O., Bolton, M., Bradbury, G., Brereton, T., Camphuysen, C.J., Durinck, J. and Felce, T. (2020). Distribution maps of cetacean and seabird populations in the North-East Atlantic. Journal of Applied Ecology, 57(2), 253-269.

We appreciate there is limited information available around the potential interaction between marine mammal prey species and EMF from buried cables, however there is an absence of information on the potential interactions between EMF from 'exposed' dynamic cables.

Given the novel nature of floating wind technology, together with the scale of this and other ScotWind proposals, we consider there is an urgent need to better understand EMF effects from dynamic cables, as well as the potential risk of entanglement. This is likely to be best addressed through strategic monitoring and we welcome the ScotMER project "*A Targeted Approach to Defining EMF from Subsea Cables and Understanding Potential Impacts on Fish and Benthic Species*".

At this stage, we also advise that operational noise from turbines should be scoped in as well as operational noise from dynamic cables, due to the scale of the development and the limited understanding of underwater noise from floating wind projects.

UXO clearance

In considering UXO, we advise the applicants to refer to the 2022 Joint Interim Position Statement[27]. Our preference is to see the use of deflagration as a removal technique and there is currently a deflagration campaign ongoing in Scottish waters. However, in the absence of the outcomes of this campaign, we advise that currently, both high order and low order clearance should be modelled to ensure the worst case scenario is assessed.

Subsea noise generated during piling

We recognise that the construction methods for floating OWF technology are expected to produce less subsea noise than that of fixed foundation OWFs. However, the scale of Ossian comprises up to 270 WTGs each with potentially 9 piled anchors, along with 6 OSPs with 16 piles per platform with a construction period of up to 9 years. While we appreciate non-piling mooring techniques will be explored for the WTGs, we understand that there could still be a significant scale of anchor piling needed for this project.

We also note that bottlenose dolphin (Appendix 9, paragraph 242) and harbour seal (Appendix 9, paragraph 241) have been scoped out for further assessment and while we acknowledge that they both tend to be more coastal species, we advise they are scoped in for further assessment until the noise modelling results for piling provides evidence that they can be ruled out of requiring further assessment. Similarly, due to a recent increase in sightings of humpback whale on the east coast of Scotland, we advise that this species is also included in the marine mammal assessment (this may be qualitative).

We encourage the applicant to work collaboratively to understand cumulative impacts from underwater noise, making use of the Cumulative Effects Framework and working with neighbouring developers to reduce and better understand cumulative subsea noise.

Disturbance or injury arising from vessel movements/ Altered prey availability/ Entanglement/ Operational noise from anchor mooring lines

[27] https://www.gov.uk/government/publications/marine-environment-unexploded-ordnance-clearance-joint-interim-position-statement

We welcome the inclusion of these impact pathways into assessment and have no specific comments to offer.

Approach to assessment

We broadly support the approach to assessment set out in section 6.3.8. Most of the relevant technical guidance has been identified in paragraph 406, however we advise that JNCC guidance on explosives[28] and seismic[29] activities should be added.

Cumulative impacts

We are broadly content with the proposed approach to cumulative assessment described in section 6.3.9.

Mitigation and monitoring

We welcome the designed in measures described in section 6.3.5. We note the content of the Mitigation and Monitoring Commitments Register in the EIA Scoping Report (Appendix 2), which includes a Marine Mammal Mitigation Plan (MMMP). We specifically welcome the proposed use of PAM, ADDs and MMOs in the MMMP. We advise that the full range of mitigation measures and published guidance is considered and discussed in the EIA Report.

There do not appear to be any specific marine mammal monitoring measures in Appendix 2, and further information on proposed marine mammal monitoring should be discussed in the EIA Report.

Transboundary impacts

Consideration may need to be given to transboundary effects for certain cetacean species, but not for seal species due to existing marine mammal management units. Once initial impact assessment has been carried out we can provide further advice on this aspect.

Habitats Regulations Appraisal (HRA) Stage 1 LSE Screening Report

We note that HRA Stage 1 LSE Screening Report paragraph 157 lists 5 UK European sites designated for Annex II marine mammals. However, due to the distance between the proposal and these designated sites, alongside the foraging ranges of the relevant species, we do not support this list of UK European sites. We advise that Moray Firth SAC should remain scoped into assessment, and all other marine mammal sites should be scoped out. We offer further advice below.

Grey seal

We advise screening sites in for assessment if the project site/ impact radius is within 20km of the SAC. Although grey seal can and do forage considerable distances, the Conservation Objectives for grey seal SACs relate to the protection of the breeding colony. During this sensitive time, grey seals do not generally travel further than 20km and we therefore use this distance as a connectivity buffer. Outside the breeding season the number of grey seals present at a protected site can dramatically decrease. There is evidence to show that grey seals do not forage close to the

[28] https://hub.jncc.gov.uk/assets/24cc180d-4030-49dd-8977-a04ebe0d7aca
[29] http://jncc.defra.gov.uk/pdf/jncc_guidelines_seismicsurvey_aug2017.pdf

SAC outside the breeding season and instead can travel to different management units when foraging (Carter et al., 2022)[30].

Grey seal telemetry data is presented in Figure 5.1. We note that there is evidence of grey seal travelling through the proposed array site, however we are content for grey seal SACs to be scoped out at this time as there is no evidence of hotspots or regular foraging areas within the project boundary.

Harbour seal

We advise screening sites in for assessment if the project site/impact radius is within 50 km of the SAC. Harbour seal show greater site fidelity throughout the year and, unlike grey seal, there is no seasonal difference. We would consider ranges further than this if there is tagging information to suggest SAC animals were regularly using the project site area.

Harbour seal telemetry data is presented in Figure 5.2. We note that there is evidence of harbour seal travelling through the proposed array site, however we are content for harbour seal SACs to be scoped out at this time as there is no evidence of hotspots or regular foraging areas within the project boundary.

Cetaceans

Our position is that the Southern North Sea SAC can be screened out for harbour porpoise, due to the distance from the proposal.

In the absence of noise contours and until noise modelling is complete, Moray Firth SAC should be scoped in for further assessment, due to the potential connectivity of the coastal bottlenose dolphin population on the East coast of Scotland and the Moray Firth SAC.

[30] Carter, M.I., Boehme, L., Cronin, M.A., Duck, C.D., Grecian, W.J., Hastie, G.D., Jessopp, M., Matthiopoulos, J., McConnell, B.J., Miller, D.L. and Morris, C.D. (2022). Sympatric seals, satellite tracking and protected areas: habitat-based distribution estimates for conservation and management. Frontiers in Marine Science.

NatureScot advice on EIA Scoping Report and HRA Stage 1 LSE Screening Report for the Ossian Offshore Wind Farm

Appendix C – Seascape, landscape and visual impact assessment (SLVIA)

SLVIA is considered in section 5.12 of the Scoping Report.

Due to the location of this proposal, the distance from shore, as well as the advice we provided during the Sectoral Marine Plan consultation[31], we advise that SLVIA for the offshore elements located within Array is not required and can be scoped out of assessment.

[31] https://www.nature.scot/doc/sectoral-plan-consultation-summary-and-design-guidance

NatureScot advice on EIA Scoping Report and HRA Stage 1 LSE Screening Report for the Ossian Offshore Wind Farm

Appendix D – Benthic subtidal ecology

Benthic subtidal impacts are considered in EIA Scoping Report section 6.1, and Appendices 6 and 7; with links to section 5.1 (Physical Processes). The scoping questions to consultees set out in section 6.1.11 are answered in our advice below.

Study area

The proposed approach is to define two study areas, as described in section 6.1.2 and Figure 6.1, which are:

- Array benthic subtidal ecology study area – defined by the array site boundary; and
- Regional benthic subtidal ecology study area – defined as a much wider area of the North Sea, adapted from the Sectoral Marine Plan: East Region.

Array benthic subtidal ecology study area

We recommend that this study area is re-defined as the site boundary plus one tidal excursion, as per the physical processes assessment. This will ensure that any impacts which range over this distance (e.g. sedimentation) are fully considered.

Regional benthic ecology study area

This study area sets the development into the context of the wider east-of Scotland. We note that this is a very large area, extending well beyond any likely impacts and suggest that a smaller area may be more appropriate.

Baseline characterisation

We support the proposed approach of carrying out a desk-based review of existing benthic subtidal ecology data, focusing on sourcing data that has been collected within or near to the study area. We support the list of existing datasets as described in Appendix 6, Apx Table 6.1. We note that this has been supplemented by site-specific survey data obtained from grab sampling, seabed imagery sampling and epibenthic beam trawls as described in Appendix 7.

We recommend the use of eDNA surveys within the offshore windfarm array area (and export cable corridor route) to help provide information on benthic subtidal ecology. This method may potentially offer significant benefits over traditional sampling methods that may be advantageous for the future of environmental monitoring. However, eDNA is still a relatively novel method of sampling with limited studies on its effectiveness.

Current limitations of eDNA techniques are that they only provide a proxy for the benthic features and will not provide a direct measure of presence of the species. They also do not give a measurement of absolute abundance/biomass and only provide data on the relative abundance of the DNA of marine organisms (Franco *et al.* 2020)[32]. The benefits of eDNA surveys are that they

[32] Franco, A., Nunn, A., Smyth, K., Hänfling, B. and Mazik, K. (2020). A review of methods for the monitoring of inshore fish biodiversity. Natural England Commissioned Report, NECR 269.

may be particularly suited to detecting rare, cryptic, endangered or invasive species. Comparison with traditional survey methods will be helpful in understanding species likely to be present in the windfarm array area.

The site appears to be fairly homogeneous, with two dominant broad habitat types:

- Faunal communities of Atlantic circalittoral sand; and
- Faunal communities of Atlantic circalittoral mixed sediment.

Within these broad habitat types, there are two specific habitats which are components of the PMF "Offshore Subtidal Sands and Gravels". In addition, the PMF ocean quahog *Arctica islandica* has been recorded throughout the site. Horse mussel *Modiolus modiolus* is present, but only as scattered individuals rather than the reef form which is the PMF.

We note that no Annex 1 reefs were recorded. If this or any other sensitive habitats were to be found at a later date, micro-siting or other mitigation will be required to prevent damage or disturbance.

Potential impacts

Table 6.4 summarises the impacts to be scoped into the benthic subtidal ecology assessment, and Table 6.5 the impacts proposed to be scoped out of assessment. We broadly support the proposed approach, however we do not support scoping out of:

- Increased suspended sediment concentrations (SSCs) and associated deposition;
- Increased risk of introduction and spread of INNS; and
- EMF.

We highlighted these impact pathways in the relevant Scoping Workshop discussions and advised that these should be scoped in. For each pathway there is uncertainty around potential impacts on benthic species, including PMFs. In our view they should therefore be scoped into the assessment, even if this is through a qualitative assessment.

Approach to assessment

We broadly support the approach to assessment set out in section 6.1.8, and we welcome the proposed use of FeAST to inform this.

Priority Marine Features (PMFs)[33]

We recommend that the assessment should quantify, where possible, the likely impacts to key benthic ecology PMFs. It should assess whether these could lead to a significant impact on the national status of the PMFs being considered[34].

Cumulative impacts

We are broadly content with the proposed approach to cumulative assessment described in section 6.1.8. This section states that effects from the Array on benthic receptors are likely to be localised to within the footprint of the Array. Further consideration is needed on the potential for cumulative impacts to occur across a larger scale, even if the project alone impacts do not overlap

[33] https://www.gov.scot/policies/marine-environment/priority-marine-features/
[34] https://www.nature.scot/doc/priority-marine-features-guidance

spatially. For example, impacts from EMF are likely to be localised, however given the scale of potential wind farm development across this region each with associated dynamic and or inter-array as well as interconnector and export cables it is possible that a 'network' or 'barrier' effect from EMF effects could impact migrating species. This requires further consideration.

Mitigation and monitoring

We welcome the designed in measures described in section 6.1.5. We advise that the full range of mitigation measures and published guidance is considered and discussed in the EIA Report. This should specifically include:

- Micro-siting of infrastructure around sensitive habitats (if any are subsequently found);
- Cable Plan and Cable Burial Risk Assessment for the inter-array cables;
- Scour Protection Management Plan (for the anchors, piles, rock placement, mattresses and any other infrastructure on the seabed).

No specific monitoring for benthic subtidal ecology is mentioned in the Mitigation and Monitoring Commitments Register in the EIA Scoping Report (Appendix 2). Further information on proposed benthic subtidal ecology monitoring should be discussed in the EIA Report.

We recommend that monitoring of EMF is considered, to validate predictions made in the EIA Report, and to improve the understanding of the potential effects. This may be possible through wider collaborative research.

We also recommend that consideration of INNS monitoring is included.

We recommend the use of eDNA surveys within the offshore windfarm array area (and export cable corridor route) to help provide information on benthic subtidal ecology. This method may potentially offer significant benefits over traditional sampling methods that may be advantageous for the future of environmental monitoring. However, eDNA is still a relatively novel method of sampling with limited studies on its effectiveness.

Current limitations of eDNA techniques are that they only provide a proxy for the benthic features and will not provide a direct measure of presence of the species. They also do not give a measurement of absolute abundance/biomass and only provide data on the relative abundance of the DNA of marine organisms (Franco et al. 2020). The benefits of eDNA surveys are that they may be particularly suited to detecting rare, cryptic, endangered or invasive species. Comparison with traditional survey methods will be helpful in understanding species likely to be present in the wind farm array area

Transboundary impacts

We advise that there are no transboundary impacts.

Habitats Regulations Appraisal (HRA) Stage 1 LSE Screening Report

We agree with the conclusion in the HRA Stage 1 LSE Screening Report that no sites with Annex 1 habitat features need to be taken forward to assessment.

NatureScot advice on EIA Scoping Report and HRA Stage 1 LSE Screening Report for the Ossian Offshore Wind Farm

Appendix E – Fish and shellfish ecology

Fish and shellfish interests are considered in EIA Scoping Report section 6.2 (Fish and Shellfish Ecology), and Appendix 8; as well as section 5.2 (Subsea Noise). Our advice below focusses on:

- fish and shellfish species, and their associated habitats where appropriate, that are protected features of European sites or Nature Conservation MPAs; and
- species of conservation interest including PMFs and key prey species.

The scoping questions to consultees set out in section 6.2.11 are answered in our advice below.

Study Area

We are broadly content with the fish and shellfish study area as defined in section 6.2.2 and Figure 6.3, which comprises:

- the array site boundary; and
- the Northern North Sea.

The EIA Scoping Report states that this area is large enough to consider all direct and indirect impacts on identified receptors.

We advise that this is a very large area. The applicant may wish to consider a smaller study area based on either ICES rectangles (as shown in Appendix figure 8.5) or modelled subsea noise and/ or suspended sediment concentration (SSC) data, whichever extends furthest from the site.

Baseline characterisation

We support the proposed approach of carrying out a desk-based review of existing fish and shellfish ecology data, focusing on sourcing data that has been collected within or near to the study area. We note that this will be supplemented by fish and shellfish information obtained from site-specific grab sampling, seabed imagery sampling and epibenthic beam trawls.

We recommend the use of eDNA surveys within the offshore windfarm array area (and export cable corridor route) to help provide information on PMFs and prey fish species. See our advice above, within the benthic subtidal ecology appendix.

Appendix 8, Apx Table 8.1 captures most of the relevant baseline datasets, but we recommend inclusion of "*Essential Fish Habitat Maps for Fish and Shellfish Species in Scotland*" developed by the Scottish Marine Energy Research (ScotMER)[35] programme, which is due for publication shortly. We also recommend inclusion of the Feature Activity Sensitivity Tool (FEAST)[36], which is also due to be updated shortly with fish and shellfish information.

With regard to data sources on fish and EMF, we recommend that a recent MSc paper by Lucie Hervé "*An evaluation of current practice and recommendations for environmental impact*

[35] https://www.gov.scot/policies/marine-renewable-energy/science-and-research/
[36] http://www.marine.scotland.gov.uk/FEAST/

assessment of electromagnetic fields from offshore renewables on marine invertebrates and fish" is included as a data source in Apx Table 8.1. We can supply a copy of this paper on request.

Fish assemblage

We advise that the fish assemblage grouping should be based around PMF and prey species. Of particular interest are those species with lifecycle connections with the seabed, this would include:

- sandeel throughout their whole lifecycle (not just spawning) and their specific, often patchy, habitat requirements;
- herring during spawning only, and protection of the very specific gravely habitat suitable for herring spawning;
- cod during spawning only; and
- elasmobranch species present and impacts of EMF.

Shellfish assemblage

Appendix 8 section 8.3.4 focuses mainly on commercial shellfish species, and should be updated to include other shellfish species that may be in the study area such as flame shell, etc, which are PMFs and will require consideration.

Spawning and/ or nursery grounds

We are content with the proposed approach to assessment.

Designated sites

We note that several SACs for migratory fish are included in this list of designated sites. As previously advised to Marine Directorate, we cannot advise on these species under the HRA process. Due to uncertainty on where migratory fish (Atlantic salmon, sea and river lamprey) go within marine waters and any connectivity back to natal rivers, we consider these species should be assessed through EIA only and not through HRA. For other species, like seals, we have a reasonable understanding of connectivity to individual SACs. We also have population estimates for all seal SAC populations in the standard data forms – part of the citation package. For diadromous fish species, we do not have population data for any salmon or lamprey SAC data forms. This inability to understand connectivity between individual rivers and the development area currently prohibits an informed assessment of the actual impact on individual site integrity. We are aware of work being led by ScotMER on the Review of Evidence of Diadromous Fish, which is an area of research that may change conclusions on how diadromous fish are treated in both EIA and HRA going forward.

Potential impacts

Table 6.9 summarises the impacts to be scoped into assessment, and Table 6.10 the impacts proposed to be scoped out of assessment. We broadly support the proposed approach and offer the following comments.

Subsea noise

We support scoping in the effect of underwater noise during construction and decommissioning phases, and the effects of UXO clearance.

Subsea noise during the operation and maintenance phase is proposed to be scoped out. We advise that this should be scoped in. The effects arising from floating wind turbine generators, their anchoring systems and cabling are not well understood at present. This will require further discussion and agreement. We welcome the inclusion of both sound pressure and particle motion in the proposed approach to assessment. Sensitive fish species have not been specified but we would expect to see sandeel, cod and herring eggs if appropriate to the study area.

Temporary habitat loss and disturbance/ Long-term habitat loss and disturbance

Habitat loss and disturbance (temporary and long-term) is a key impact pathway identified for the construction, operation and maintenance, and decommissioning stages. All appropriate pre-construction seabed preparation works should also be included.

EMF

We welcome the scoping in of EMF effects on fish and shellfish receptors as another impact pathway that is not well understood at present, to increase our understanding of the effects of dynamic cables, particularly as floating wind becomes an established technology.

We note that cable burial is listed as a designed in measure that will reduce exposure to EMF. Research by Hutchison et al. (2020)[37] considers that cable burial may actually generate a response from sensitive species, as it reduces EMF levels to the 'normal' range that species use to hunt prey or navigate, and as such is unlikely to fully mitigate potential effects.

Colonisation of hard structures

The proposed approach focusses on the introduction of new structures leading to increased biodiversity and/ or changes in ecological processes. The effects of introducing floating wind turbine generators, anchoring systems and cabling are not well understood at present, and so we support the scoping in of colonisation of hard structures. This potential impact is also linked to the potential need to remove marine growth, and methods for achieving this.

We advise that the EIA Report should provide details on how INNS will be considered, monitored and recorded. We note that INNS are incorporated into the Benthic Subtidal Ecology assessment and recommend that any relevant links to fish and shellfish receptors are made clear in the Fish and Shellfish assessment.

Changes in prey species availability

We recognise that changes to prey availability is an impact pathway scoped into both marine mammal and offshore ornithology assessments. Clear links should be made between those assessments and the fish and shellfish assessment. Most EIA Reports concentrate on receptor specific impacts, however we increasingly need to understand impacts at the ecosystem scale. Therefore, consideration across key trophic levels will enable better understanding of the consequences (positive or negative) of any potential changes in prey distribution and abundance on marine mammal (and other top predator) interests and how this may influence population level impacts. Consideration of how this loss and or disturbance may affect the recruitment of key

[37] Hutchison, Zoe & Gill, A. B. & Sigray, Peter & He, Haibo & King, John. (2020). Anthropogenic electromagnetic fields (EMF) influence the behaviour of bottom-dwelling marine species. Scientific Reports. 10.

prey (fish) species through impacts to important spawning or nursery ground habitats should also be assessed. In addition, the PrePARED (Predators and Prey Around Renewable Energy Developments)[38] project will also assist in the understanding of predator-prey relationships in and around fixed offshore wind farms which started in 2022 and will run for five years.

Increased SSC and sediment deposition

Sediment-related impacts are proposed to be scoped out on the basis that sediment will be deposited locally and none of the species within the site are sensitive to smothering, which we support. However, modelling outputs from other wind farms show that sand wave clearance could disperse suspended sediments further than the boundaries of the site, depending on the location where the activity takes place. It therefore has the potential to smother herring eggs and other receptors which are sensitive to burial, and there may be herring spawning grounds in the area around the proposal (see Coull et al, 1998)[39]. We therefore advise that this impact is scoped into assessment.

Approach to assessment

We broadly support the approach to assessment set out in section 6.2.8, and we welcome the separation consideration of impacts on diadromous fish (paragraph 368) and key forage fish species (paragraph 369).

We recommend inclusion of the NatureScot Commissioned Report 791 "*Understanding the potential for marine megafauna entanglement risk from renewable marine energy developments*"[40]. Other relevant guidance that should be included is: JNCC guidance on underwater noise[41], unexploded ordnance clearance - joint interim position statement[42] and the Scottish Marine Wildlife Watching Code[43]. We also note that section 5.2.7 correctly identifies the most relevant technical guidance on subsea noise and fish receptors.

Priority Marine Features (PMFs)[44]

We recommend that the assessment should quantify, where possible, the likely impacts to key fish and shellfish PMFs. It should assess whether these could lead to a significant impact on the national status of the PMFs being considered[45].

Cumulative impacts

We note that subsea noise is anticipated to be the key impact scoped into cumulative assessment.

Given the scale of ScotWind and the number of proposed developments, it may be too premature to discount cumulative impacts. In addition to the impacts associated within the windfarm array

[38] https://owecprepared.org/
[39] Coull, K., A., Johnstone, R. and Rogers, S., I. (1998). *Fisheries sensitivity maps in British waters.* UKOOA Ltd.
[40] https://www.nature.scot/doc/naturescot-commissioned-report-791-understanding-potential-marine-megafauna-entanglement-risk
[41] https://jncc.gov.uk/our-work/marine-mammals-and-noise-mitigation/
[42] https://www.gov.uk/government/publications/marine-environment-unexploded-ordnance-clearance-joint-interim-position-statement
[43] https://www.nature.scot/doc/scottish-marine-wildlife-watching-code-smwwc
[44] https://www.gov.scot/policies/marine-environment/priority-marine-features/
[45] https://www.nature.scot/doc/priority-marine-features-guidance

consideration should also be given to displaced fishing activity for habitat loss / change to key forage species.

Mitigation and monitoring

We welcome the designed in measures described in section 6.2.5. We advise that the full range of mitigation measures, published guidance, and any proposed monitoring are considered and discussed in the EIA Report.

No specific monitoring for fish and shellfish is mentioned in the Mitigation and Monitoring Commitments Register in the EIA Scoping Report (Appendix 2). Further information on proposed fish and shellfish monitoring should be discussed in the EIA Report.

Transboundary impacts

We advise that there are unlikely to be any transboundary impacts.

NatureScot advice on EIA Scoping Report and HRA Stage 1 LSE Screening Report for the Ossian Offshore Wind Farm

Appendix F – Physical processes

Physical processes are considered in section 5.1 and Appendix 5 of the EIA Scoping Report. These conclude that this topic will be scoped out of further assessment.

Our understanding of the impacts of offshore wind farms, both fixed and floating, on stratification particularly in deeper water is still at an early stage, with some concerns noted at the scoping workshop. This is not an area we have expertise in and we therefore advise that advice should be sought from Marine Directorate Science.

NatureScot advice on EIA Scoping Report and HRA Stage 1 LSE Screening Report for the Ossian Offshore Wind Farm

Appendix G – Subsea noise

Subsea noise is considered in EIA Scoping Report section 5.2, and has links to sections 6.2 (Fish and Shellfish Ecology) and 6.3 (Marine Mammals). The scoping questions to consultees set out in section 5.2.10 are answered in our advice below.

Study area

We support the proposed approach of not defining a specific subsea noise study area, and instead considering subsea noise as a factor in determining the relevant receptor study areas (for marine mammals, fish and shellfish).

Baseline characterisation

We note the narrative on highly variable baseline noise levels and the knowledge gaps in understanding of the marine soundscape, as presented in section 5.2.3. We support the proposed approach to assessment based on absolute noise criteria, rather than using the difference between baseline noise level and activity-related noise.

Potential impacts

Table 5.5 summarises the impacts to be scoped into the subsea noise assessment. We broadly support the proposed approach and note that noise modelling results will inform the Marine Mammal and Fish and Shellfish EIA chapters.

Approach to assessment

We welcome the use of the guidance for subsea noise stated on page 33 of the Subsea Noise Chapter. We agree with the use of Southall et al. (2019) and NMFS (2018) to describe the impact criteria to be carried forward into the EIA Report.

We note that sound source levels for piling will be determined using von Pein et al (2022) and we note that this improves upon previous assessments which relied on conversion factors. We recommend that the applicant considers the MSS commissioned ScotMER report[46] which uses a linear approach with the aim of resulting in more realistic modelled noise. However, in the meantime, we welcome the use of thresholds presented in Southall et al. (2019) to assess the risk of permanent auditory injury as well as the dual metric approach.

We support the proposed modelling methodology. We advise that bottlenose dolphin, harbour seal, and humpback whale are added to the list of receptors (as per our marine mammal advice above).

While we acknowledge that the noise associated with the construction of floating OWF projects is considerably less than that associated with fixed foundation OWFs, this will depend on the methods applied to moor the WTGs and OSPs. We note that there could be a maximum of 270 floating WTGs, with up to 9 moorings per turbine (either anchored or piled). We also understand

[46] Energy Conversion Factors in Underwater Radiated Sound from Marine Piling: Review of the method and recommendations – in prep.

that there could be up to 6 OSPs, with either up to 9 moorings (anchored or piled) for floating OSPs or 16 piles per OSP for fixed platforms.

We recommend exploring and utilising the anchoring techniques that do not require pile driven foundations and anchors for both the WTGs and the OSPs, particularly for the WTGs due to the quantity, but also if the OSPs have already been identified as likely to be fixed foundations. However, it is recognised that a mixture of anchoring techniques may be identified and selected for both the WTGs and OSPs after further analysis of the seabed.

We note that pile driven moorings for WTG anchors will only be used if all other techniques are not possible (paragraph 96).

Due to the range of anchoring options presented, we advise the applicant to consider assessing both a worst-case scenario (all piled) and a realistic worst-case scenario (to be agreed).

We have no current understanding of operational noise from floating wind turbines at this scale of development.

Cumulative impacts

When considering a construction period of up to 9 years and that Ossian is adjacent to multiple, large fixed and floating technology projects, this raises issues around the cumulative impacts from subsea noise from piling and vessel noise during the construction phase.

In addition there is no knowledge of the operational noise of a floating windfarm of this scale and this should be considered based on the limited, but emerging evidence from operational floating windfarms.

We recommend the use of the Cumulative Effects Framework and collaboration with neighbouring OWF developers in the region to reduce and mitigate the potential impacts from subsea noise on marine mammal populations

Mitigation and monitoring

We welcome the designed in measures described in section 5.2.5, 6.2.5 and 6.3.5.

Ossian is a large-scale floating project in a region of Scottish waters which may become increasingly developed in the coming years. We therefore recommend that noise monitoring is undertaken through all stages of development. Our understanding of underwater noise from a large scale floating OWF is extremely limited at this time.

Transboundary impacts

We advise that there are unlikely to be any transboundary impacts.

Dee District Salmon Fishery Board

Dee District Salmon Fishery Board

Marine Licensing and Consenting Casework Officer
Marine Planning & Policy
Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

By email to MS.MarineRenewables@gov.scot
27th April 2023

Dear Sirs,

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE OSSIAN OFFSHORE WIND FARM LOCATED APPROXIMATELY 80KM SOUTH-EAST FROM THE ABERDEENSHIRE COASTLINE

On behalf of the Dee District Salmon Fishery Board (Dee DSFB) we welcome the opportunity to respond to the Ossian Offshore Wind Farm Limited - Consultation on Request for Scoping Opinion.

Designations & Conservation Status

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

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

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

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

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

Wild Salmon Strategy and Conservation regulations

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

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

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

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

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

Position

The Dee DSFB welcomes the opportunity to respond to the scoping opinion and would wish to be consulted further during this process with specific interest in the migratory fish species Atlantic Salmon and sea trout.

We note that the location of the proposed site, cable corridor and landfall are out with the Dee District Salmon Fishery Board district and that the Dee SAC is approximately 80km southeast from the site boundary. However, due to the diadromous nature of Atlantic salmon and sea trout we are pleased to see that these migratory fish have been considered and 'scoped in' to the assessment on a range of 'activities and impacts' at this stage as identified section 6.2.3. We agree to the study area defined for diadromous fish.

We welcome the additional sections covering diadromous fish proposed for the EIA and these separate sections covering sensitivity of and implications of the impact on diadromous fish for each

impact assessment as noted in section 6.2.8.368. We agree that at all potential impacts (Table 6.9) have been identified for fish and shellfish ecology in the Array EIA and that those scoped out in (Table 6.10) are appropriate.

We welcome the interrogation of the datasets and scientific literature available as identified in Appendix 8 (table 8.2). We would suggest that the scientific information relating to salmon and sea trout smolt tracking from the Aberdeen Offshore Windfarm (EOWDC) research also be considered. An interim report is available on the website here https://group.vattenfall.com/uk/what-we-do/our-projects/european-offshore-wind-deployment-centre . A final report is due for publication shortly.

Furthermore, we note that throughout the scoping report there is no reference to the ScotMER Diadromous Fish Specialist Receptor Group. We would therefore suggest that further consultation takes place with Marine Scotland Science and Fisheries Management Scotland with reference to broadening our understanding of any potential impact upon diadromous fish because of this proposed development.

Yours sincerely

Redacted

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