From: radionetworkprotection@bt.com
To: MS Marine Renewables
Cc: [Redacted] radionetworkprotection@bt.com
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021 - WID11629
Date: 06 September 2021 14:11:59
Attachments: image002.jpg
image003.png
image004.png

OUR REF; WID11629

Dear Sir/Madam

Thank you for your email dated 25/08/2021.

We have studied this Forthwind Offshore Wind Demonstration Project – Methil with respect to EMC and related problems to BT point-to-point microwave radio links.

The conclusion is that, **Turbine 1 located at 337812E; 697333N** as detailed in the 'Scoping Request' document should not cause interference to BT's current and presently planned radio network.

Please direct all queries to radionetworkprotection@bt.com

Kind regards

[Redacted]

Engineering Services - Radio Planner

Networks

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 25 August 2021 16:27
Cc: [Redacted] @gov.scot; [Redacted] @gov.scot
Subject: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021 - WID11629

> You don't often get email from ms.marinerenewables@gov.scot. Learn why this is important

Dear Sir/Madam,

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 ("the MW EIA Regulations")

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 2017 ("the EW EIA Regulations")

Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil

In respect of the proposed marine licence and section 36 applications for the above works under the Marine (Scotland) Act 2010 and the Electricity Act 1989, Forthwind has requested the Scottish Ministers adopt a scoping opinion in relation to the above proposed works under Regulation 14(1) of the MW EIA Regulations and Regulation 12(1) of the EW EIA Regulations.

The scoping report submitted by the applicant can be found at:
https://marine.gov.scot/node/21519

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 their proposed marine licence applications, 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.

The scoping request includes a description of onshore infrastructure and indicates that the previously granted deemed planning permission will be used in respect of the proposed development. Please be advised that there is a likelihood that a new deemed planning will be required. MS-LOT would therefore be grateful if consultees could confirm, if applicable, whether they are content that the onshore aspects are scoped out of proposed EIA report based on the information given in the scoping request should a new deemed planning be required.

Previous application and EIA documentation submitted in 2016 pertaining to the existing s.36 consent and marine licences referred to within the scoping request is available to download here.

Please submit your response electronically to ms.marinerenewables@gov.scot by 24 September 2021. 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.

Yours faithfully,

[Redacted]

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

Covid-19: Marine Scotland - Licensing Operations Team (MS-LOT) is working from home and, as a result, determination of applications may take longer than our stated timelines. In addition, MS-LOT is unable to respond to phone enquiries. Please therefore communicate with MS-LOT via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries.

****

*****

From: [Redacted]
To: [Redacted] MS Marine Renewables
Cc: [Redacted]
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021
Date: 04 October 2021 16:19:49

Dear [Redacted]

Thank you for the reminder email. It is a nil return from the Chamber of Shipping at this juncture.

Kind regards,

[Redacted]

UK Chamber of Shipping
30 Park Street, London, SE1 9EQ
DD [Redacted]
Mob [Redacted]
[Redacted] @ukchamberofshipping.com
www.ukchamberofshipping.com

From: [Redacted] @gov.scot <[Redacted] @gov.scot>
Sent: 01 October 2021 16:36
To: MS.MarineRenewables@gov.scot
Cc: [Redacted] @gov.scot
Subject: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Dear Sir/Madam,

The closing date of the 24 September 2021 for the consultation on this scoping has now passed and we haven't received a response from you. Therefore, we are assuming a nil return.

Kind regards,

[Redacted]

Marine Scotland – Licensing Operations Team
e:[Redacted] @gov.scot
w: http://www.scotland.gov.uk/marinescotland
COVID-19: Marine Scotland - Licensing Operations Team(MS-LOT) is working from home and as a result determination of applications may take longer than our stated timelines. In addition MS-LOT is unable to respond to phone enquiries, please communicate with MS- LOT via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries.
****
*****

[Redacted]

From: [Redacted] @elyc.org.uk>
Sent: 01 October 2021 17:36
To: [Redacted]
Cc: ELYC Secretary; MS Marine Renewables; [Redacted]
Subject: Re: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Thanks [Redacted]

Yes, no comment to contribute.

Best wishes,

[Redacted]

On Fri, 1 Oct 2021 at 16:36, <[Redacted] @gov.scot> wrote:

> Dear Sir/Madam,
>
> The closing date of the 24 September 2021 for the consultation on this scoping has now passed and we haven't received a response from you. Therefore, we are assuming a nil return.
>
> Kind regards,

[Redacted]

> Marine Scotland – Licensing Operations Team
> e: [Redacted] @gov.scot
> w: http://www.scotland.gov.uk/marinescotland
>
> COVID-19: Marine Scotland - Licensing Operations Team(MS-LOT) is working from home and as a result determination of applications may take longer than our stated timelines. In addition MS-LOT is unable to respond to phone enquiries, please communicate with MS- LOT via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries.
>
>

From:	[Redacted]
To:	[Redacted]
Subject:	21/02721/CON - Forhwind Ltd. - Forthwind Offshore Wind Demonstrator Project, Firth of Forth, off Methil coast
Date:	15 October 2021 15:00:57

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 ("the MW EIA Regulations")
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 2017 ("the EW EIA Regulations")

Hi [Redacted]

My apologies that I am only getting around to responding to this today.

Having consulted with colleagues in various Services of the Council, I do not have much to comment upon.

Any onshore elements to the proposal are likely to be minor in the scheme of things and would be located in the Fife Energy Park, where no difficulties are expected to arise over planning permission.

As previously advised, the key factor from Fife Council's point of view will be the impact on the seascape and views from the Fife Coast. The move from two (two-bladed) turbines to one (three bladed) turbine is seen as an improvement in this context. Even though the proposed turbine will be larger than the two previously consented turbines, its location significantly further offshore from the existing ORE Catapult turbine, and the move to three blades (matching the design of the ORE Catapult turbine) is likely to make the Forthwind and ORE Catapult demonstrator turbines read better together in the view from the Fife Coast, particularly from the Methil area.

We have no specific comments to make on the ecology side of things, other than to reiterate that the designated European sites in the firth of Forth will be the key considerations, but are confident that NatureScot will be able to provide all the ecology input and advice that you require for that element.

We would also expect any potential impacts on local fisheries to be considered but, again, the move from two turbines to one is considered to represent a probable improvement in the position in that context.

I trust that these comments are helpful.

Kind regards,
[Redacted]

[Redacted]

Lead Professional (Minerals)
Development Management
Planning Services
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Fife House
North Street
GLENROTHES
Fife
KY7 5LT
development.central@fife.gov.uk
www.fife.gov.uk/planning
Follow us on twitter: @FifePlanning
LISTEN | CONSIDER | RESPOND

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

By email to:
MS.MarineRenewables@gov.scot

Marine Scotland (Marine Renewables)
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

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

Our case ID: 300024638

24 September 2021

Dear Marine Scotland

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Forthwind Offshore Wind Demonstration Project - Scoping Consultation

Thank you for your consultation which we received on 25 August 2021 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).

Fife Council's archaeological and cultural heritage advisors will also be able to offer advice on the scope of the cultural heritage assessment. This may include heritage assets not covered by our interests, such as unscheduled archaeology, and category B- and C-listed buildings.

Proposed Development
We understand that the proposed development comprises installation of new wind turbine technology at the Forthwind Offshore Wind Demonstration Array sited approximately 1.5km from the coast of Methil. This will involve the construction of a single three bladed wind turbine with a rotor diameter of up to 255 m.

We note that in December 2016 a Marine Licence and Section 36 were secured for the installation and operation of two demonstration offshore wind turbines. We understand that the currently proposed development is broadly similar in terms of location and most aspects of the design envelope previously presented in the original application for the 2016 consented project but the turbine is different to the 2B Energy design of the original consent.

We understand that all changes proposed have the potential to affect only the offshore aspects of the previous consent and the new application is not expected to exceed any aspect identified in the onshore project envelope proposed previously in the original EIA. Therefore, it is proposed that all onshore aspects are scoped out of EIA report.

Scope of assessment
On 14 June 2019 we issued scoping advice on the then proposed installation of two wind turbines with a maximum rotor tip height of 250m. We note the applicant's comments (on pages 208-212 and throughout the report) in relation to our 2019 scoping advice. We also note that one of the proposed turbines no longer forms part of the proposal.

We accept the justification provided in the current scoping report for scoping marine archaeology out from further assessment. We understand that the area has already been assessed for offshore archaeological and heritage assets in the 2015 EIA. Offshore surveys were completed and included within the original Environment Statement (the full geophysical survey results were provided as Appendix A in the original Environmental Impact Assessment). We understand that the surveys consisted of multibeam bathymetric, subbottom profile, sidescan sonar and magnetometer surveys and covered the development area (both the original 2015 application and the current locations). No items of archaeological or buried features were identified within the surveys, as reported in the original 2015 EIA.

We understand that the project, however, is proposing to produce, consult and implement a Written Scheme of Investigation (WSI) and Protocol for Archaeological Discoveries (PAD) prior to construction activities being undertaken and that HES will be consulted on both the WSI and PAD. We welcome this proposal.

In terms of terrestrial heritage assets, in our response dated 14 June 2019 we noted a number of historic environment assets that would need to be considered for impacts on their setting. These assets included Macduff's Castle (SM no. 860), Wemyss Caves (SM no. 817), Wemyss Castle (HB No. 16709) and Wemyss Castle GDL. We recommend that potential impacts on these heritage assets are assessed within the updated cultural heritage and archaeology chapter of the EIAR.

Overall, we consider that the proposed scope for the cultural heritage assessment is appropriate for our requirements.

Further information
The Historic Environment Policy for Scotland (HEPS 2019) was adopted on the 01 May 2019 and replaced the Historic Environment Scotland Policy Statement (HESPS 2016). The new Historic Environment Policy for Scotland is a strategic policy document for the whole of the historic environment and is underpinned by detailed policy and guidance. This includes our Managing Change in the Historic Environment Guidance Notes. All of these documents are available online at www.historicenvironment.scot/heps.

Practical guidance and information about the EIA process can also be found in the EIA Handbook (2018). Technical advice is available on our Technical Conservation website at http://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 [Redacted] and they can be contacted by phone on [Redacted] or by email on [Redacted] @hes.scot.

Yours faithfully

Historic Environment Scotland

marinescotland

Forthwind Offshore Wind Demonstration Project- Scoping Report

The Forthwind Offshore Wind Demonstration Project Scoping Report includes descriptions of a range of potential impacts. This response focuses only on the assessment of social and economic impacts.

We note the advice that MAU offered in relation to the previous application and this position still applies.

Overall, we still think that the assessment of potential social and economic impacts in the scoping report is quite narrow. We would expect a broader range of social and economic impacts to be considered and for this to be done through a Socio-economic Impact Assessment. As the development is relatively small, (a single demonstrator turbine) we recognise that the detail included in the SEIA should be proportionate. Nonetheless, a more thorough assessment of the socio-economic impacts than currently presented in the scoping report would be beneficial.

As noted in our response to the previous application, it is not clear how the potential effects have been identified/prioritised from a wide range of socioeconomic impacts that could arise from a marine development. If some impacts are scoped out, the Scoping Report must give a clear reason for doing so.

Stakeholder and community engagement

An important part of an SEIA involves meaningful engagement with the communities and stakeholders who are likely to be impacted by the development. The engagement is needed in order to check assumptions and find out what socio-economic impacts the stakeholders themselves anticipate from the development. In the Scoping Report there are plans for some consultation for the EIA as a whole, as detailed in Section 17 and a wide list of stakeholders is set out. However, SEIA requires a targeted engagement that explores stakeholder and community views of the socio-economic impacts.

We would also suggest that more consideration is given to how you will engage with those who might be impacted in different ways by the development specifically as part of the SEIA. This will include local residents in East Lothian and Edinburgh. It would also be helpful to provide a little more detail on participatory engagement methods that might be used that will allow impacted stakeholders to discuss the development and share their own views on how they expect to be affected. It is important that the communication is two way rather than impacted stakeholders being passive recipients of information.

Context and Baseline

It is recommended that SEIA includes contextual information about the local area and the communities that are living there, covering: current population structure and demographics,

main businesses/industry in the area on which local populations rely, workforce and skills base that can be drawn upon, any other local contextual information of relevance.

More details on the baseline situation would be expected in the SEIA to enable accurate assessment of the significance of anticipated impacts.

Economic Impacts:

The 'potential effects' that the scoping report focuses on for the construction, operation and decommissioning phases are quite narrow in scope. The effects included are:

- Direct job opportunities
- Supply chain opportunities
- Local infrastructure improvements
- Cost reductions in wider offshore wind industry as a result of development

We would expect to see the consideration of more specific potential effects in the SEIA, including important indicators such as:

- GVA effects (direct, indirect, induced)
- The number of workers who will be employed during the construction, operational and decommissioning phase
- Where these workers will come from (e.g. local, regional, national)
- Specific details on supply chain opportunities (e.g. local content)
- Effects on the commercial activities of other users of this marine area, during both the construction and operational phase

Wider socio-economic impacts

We would also expect to see a bit more detail on a wider range of socio-economic factors to include some more social considerations as currently there are none scoped in, yet no proper reason or evidence is given for their exclusion. There seems to be an assumption that there will not be any impacts because the development is small in scale. We won't know this unless they are given consideration. A list of socio-economic impacts that might need to be considered is provided at the annex 2 below.

Monitoring

It would be beneficial for some monitoring of the socio-economic impacts to be done of the development as it proceeds from planning to construction and operation.

Annex 1

Key components of an economic impact assessment

1. Establishing the life and stages of the Project. In this case these would be construction, operation and decommissioning.

2. Establishing and developing the baseline:
    - This is the starting point for the economic assessment and the benchmark against which to measure impacts.
    - Start with a study of the local and regional area:
        - Industrial structure i.e. existing businesses in the area
        - Socio-economic conditions i.e. levels of employment, income etc.
        - Related industries i.e. fishing, tourism
        - Local planning policies, where relevant
    - Select a range of indicators, e.g.:
        - Employment and unemployment levels
        - Structure of working age population/skills/qualifications
        - GVA

3. Identifying and scoping the economic factors:
    - Economic impacts ideally clearly stated in:
        - Life and stages of project i.e. construction, operation, decommissioning
        - Direct, indirect, induced
    - Economic Factors
        - Impacts related to GVA
        - Impacts related to employment, skills and training
        - Impacts on related industries – tourism, fishing, etc.

4. Other economic considerations
    - Displacement - an assessment of the effect of the intervention on the structure of local factor and final goods markets
    - Substitution - where the intervention causes an employed factor to be replaced by a currently unemployed factor
    - Deadweight - This is the net impact, after taking into account what would have happened in the absence of the intervention
    - Cumulative effects - effects from multiple pressures and/or activities

5. Distributional Impacts:
    - Distribution of impacts across different individuals, groups or businesses.
    - Screening – identification of likely impacts
    - Assessment – confirmation of area impacted and analysing the characteristics of the groups in the area which will be impacted
    - Appraisal – Core analysis of the impacts

Annex 2

*Table **Error! No text of specified style in document.** Types of socio-economic impact (taken from Glasson 2017[1])*

1. **Direct economic:**
   - employment, including employment cohort and safeguarding of existing employment;
   - unemployment and underemployment
   - 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
   - GVA and GNP.
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
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:**
   - effects on specific groups in society (eg: by virtue of gender, age, religion, language, ethnicity and location); environmental justice

[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

[Redacted]

Maritime and Coastguard Agency
UK Technical Services Navigation

www.gov.uk/mca
8 September 2021

[Redacted]

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

Dear [Redacted]

Forthwind Offshore Wind Demonstration Project, Methil

Scoping Opinion Consultation Response

Thank you for the opportunity to comment on the Scoping Opinion for the Forthwind Offshore Wind Demonstration Array. The MCA has reviewed the report provided by Cierco Ltd, as detailed in your email dated 25 August 2021. The MCA's remit for offshore renewable energy development is to ensure that safety of navigation is preserved whilst progress is made towards government targets for renewable energy.

A Navigational Risk Assessment (NRA) will need to be submitted in accordance with MGN 654 (and MGN 372) and the MCA's Methodology for Assessing the Marine Navigation Safety & Emergency Response Risks of Offshore Renewable Energy Installations (OREI). This NRA should be accompanied by a detailed MGN 654 Checklist which can be downloaded from the MCA website at https://www.gov.uk/guidance/offshore-renewable-energy-installations-impact-on-shipping

It is recognised that a hazard review workshop was conducted in 2017 for the nine-turbine project and the results of which will be used to inform the updated NRA. However, since the workshop was held four years ago and MCA guidance has been updated since then, MCA would recommend further consultation with relevant stakeholders to ensure the marine traffic data is still relevant and identify any potential new hazards.

The shipping and navigation study should provide updated data on the 2015 NRA and it is noted in Section 7.2 that a desk-top assessment will be carried out to identify updated information and guidance. The shipping and navigation study should usually include both radar and manual observations, in addition to AIS data to ensure vessels of less than 300gt are captured. It is noted that the marine traffic data will be updated in consultation with Forth Ports Ltd and provided up to date data can be provided that ensures seasonal variations are captured, this may be acceptable. MCA would be content to discuss this further with the applicant.

It is noted in Section 7.5 that the 2015 NRA will be updated and the applicant should ensure they are familiar with the updated guidance outlined above. Many of the guidance documents listed in this section have also been updated.

The applicant should note under Section 7.8 where it states: "*a worst-case scenario…that the cables will not be buried but surface laid and protected will be used.*", that MCA expects efforts are made to bury the cables. Particular attention should be paid to the cabling routes and where appropriate the 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, concrete mattresses, acceptable changes to Chart Datum must be discussed with Forth Ports Ltd to ensure the safety of navigation is not compromised. This will be particularly relevant where depths are decreasing towards shore and potential impacts on navigable water increase.

Under Section 7.8.5, MCA does not agree that impacts to emergency response and SAR operations should be scoped out of the assessment. 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). Attention should be paid to 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)) that can cover the entire wind farm sites and their surrounding areas.

Any application for safety zones will need to be carefully assessed and additionally supported by experience from the development and construction stages.

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. As this project progress, we would welcome engagement with the developers, and early discussion on the points raised above.

Yours sincerely,

[Redacted]

cc. [Redacted]

HM Coastguard, MCA.

[Redacted]

Ministry of Defence
Safeguarding Department
St George's House
DIO Headquarters
DMS Whittington
Lichfield
Staffordshire
WS14 9PY

Telephone [MOD]: [Redacted]

E-mail: [Redacted] @mod.gov.uk

[Redacted]

Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

01 Ocober 2021

Dear [Redacted]

Variation of consent - (in December 2016 Forthwind LTD secured a ML and S36 from Scottish Ministers for 2 demonstration WT. Forthwind are now seeking a new consent in the same location to reflect changes to wind industry).

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017.

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 2017.

Thank you for consulting the Ministry of Defence (MOD) on the above Scoping Opinion request in respect of the Forthwind Offshore Wind Demonstration Project received by this office on 25th August 2021. I write to confirm the safeguarding position of the MOD on the information that should be provided in the Environmental Statement to support any application.

The applicant has prepared an Environmental Impact Assessment (EIA) Scoping Report of the proposed development which is broadly similar in terms of location and most aspects of the design envelope previously presented in the original application for the 2016 consented project. The EIA scoping report recognises some of the principal defence issues that will be of relevance to the progression of the proposed development.

Impact on military activity has been recognised in section 15.1 Military Activities of the Scoping Report, with the offshore array being located within Firth of Forth an area used by the Navy. The proposed area does not overlap with any Practice and Exercise Areas (PEXA). We therefore do not anticipate there to be any concerns relating to military maritime activities.

The use of airspace for defence purposes in the vicinity of the proposed development have been appropriately identified and considered. The Scoping Report considers some of the aviation and radar systems that may be affected by the proposed wind farm. The MOD is correctly identified as a relevant receptor in section 15.1 Military Activities of the Scoping Report, I can confirm that the MOD has no concerns in respect of airfields or radar for this development.

Impact on military low flying has been scoped in and the applicant states in the Scoping Report that they are committed to lighting and charting the turbine and Mast. 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 summary I can confirm that the MOD has no concerns with this proposal.

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

Yours sincerely

[Redacted]

T: [Redacted]
E: MSS_Advice@gov.scot

[Redacted]
Marine Scotland Licensing Operations Team
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

29 October 2021

Forthwind Scoping – Proposal to construct single 20 MW WTG

Marine Scotland Science (MSS) have reviewed the relevant documentation and have provided the following comments.

Marine Ornithology

MSS have reviewed the Forthwind Offshore Wind Demonstration Project (FOWDP) Environmental Scoping Request report (ESRR) and the associated consultation response from NatureScot (NS) (dated 11 October 2021). MSS agree with NS and the Developer that ornithology should be scoped in to the assessment.

MSS note that this project pre-dates the plan-led process for future innovation offshore wind projects (i.e. the Draft Sectoral Marine Plan for Offshore Wind for Innovation and Targeted Oil and Gas Decarbonisation; INTOG) which was recently undergoing public consultation[1]. If adopted, this plan would provide a framework for consideration of new innovation projects inshore on Scotland's east coast including within the Firth of Forth (see Figure 3 op cit.). This is in part required due to the potential vulnerability of seabird populations to further offshore wind development in these more inshore locations. While MSS understand that FOWDP does not fall under the INTOG plan we draw attention to this for context noting that the proposed development would be sited in an area already identified as having high planning constraints for offshore wind development, which is in part due to ornithological vulnerability. Given the potential for significant impacts on SPA sites from the development in combination with other plans and projects MSS suggest that early consideration be given to the derogations process (Article 6(4) of the Habitats and Wild Birds Directives) on a 'without prejudice' basis as to the outcome of the assessment process.

NS advise that a draft Project Environmental Monitoring Plan (PEMP) should be included in the EIAR. NS advise that this 'PEMP' considers mitigation measures and monitoring work which suggests NS may be referring to an Environmental Management Plan (EMP) rather than a PEMP. MSS advise that LOT clarify this point with NS.

With respect to ornithology, MSS are in general agreement with NS's consultation response. However, we draw attention to a number of additional points and some points where MSS advise that clarification should be sought. MSS note that the proposed development is of a single turbine and in an inshore location, as such some of the developing generic guidance around assessment methodologies for ornithology for wind developments in offshore locations (and usually of larger array

[1] Marine Scotland (2021). Sectoral Marine Plan for Offshore Wind for Innovation and Targeted Oil and Gas Decarbonisation (INTOG) - Planning Specification and Context Report. https://marine.gov.scot/data/sectoral-marine-plan-offshore-wind-innovation-and-targeted-oil-and-gas-decarbonisation-intog

scale developments) may not be appropriate in this case. Given the sensitivity of the location significant impacts are possible, but the way these are assessed should not necessarily be the same as would be done for development in a more offshore location.

In their ornithology specific advice (Appendix B of NS consultation response) NS state that the ESRR does not provide sufficient detail on how the Developer proposed to assess impacts on ornithological receptor species. Thus, NS strongly advise that a draft method statement is agreed on (in writing) prior to submission of the application. MSS note that while the ESRR does provide detailed background on the project and of existing datasets for ornithology there is only brief detail on proposed assessment methodologies (section 11.4.11 and table 22). MSS thus support NS's advice that a draft method statement is prepared. This would most effectively be done once a Scoping Opinion is issued to ensure the Scoping Opinion is fully considered.

Specific comments:

- MSS support NS's advice that a HRA Report should be presented alongside the EIA Report (EIAR). This is consistent with what is proposed by the Developer (section 11.1 of ESRR).
- NS indicate that cumulative and in-combination effects will need to be considered and advise that the projects and plans to be considered should be agreed in consultation with Marine Scotland and other Regulators. MSS agree that for HRA purposes for ornithology cumulative and in-combination effects should be considered.
- There is a summary of data sources that will be used in the assessment ('Ecology Data', p 87 of ESRR). This largely refers to organisations rather than specific data sources. MSS assume the EIAR will consider appropriate data sources but this is not clear from the ESRR.
- Ornithological baseline. The ESRR summarises the ornithology baseline data previously collected (section 11.4.4). NS state that there is a need to consider previous and new concerns around the existing datasets held on the distribution and abundance of birds in the development area. In their general comment NS note that some datasets "may reach the end of their lifespan soon and may require updating with new surveys". It is not clear which datasets NS have in mind here though MSS think it likely that this may include the ornithology baseline data, where boat based surveys were completed in February 2017. MSS advise that early clarification should be sought on this point such that new surveys can be commissioned if deemed appropriate.
- A number of issues have previously been raised around the survey data (summarised in Table 16 of the ESRR) which will need to be considered. This includes potential for some species to be either attracted (e.g. large gull species) or flushed/disturbed (e.g. red-throated diver). The Developer provides some apparently anecdotal observations on responses of divers (assumed to be red-throated diver) to the survey vessel which suggest while birds are flushed the distances are generally <200 m. MSS advise that the findings of Jarrett et al. (2018) on the responses of wintering waterbirds to marine activity should be considered.
- It is noted that the survey vessel used ('The Conserver') meets minimum survey platform height requirements (5 m) for undertaking boat-based surveys for birds. This is likely less than the optimal platform height (implied to be 10 m in Camphuysen et al. 2004). The vessel details are not given, so it is not clear whether this fully meets the recommendations (of Camphuysen et al. 2004), e.g. for a vessel providing a stable platform of at least 20 m in length. MSS advise that more details should be provided in the EIAR and if there are any divergences from standard recommendations any potential influence on survey results should be discussed.
- It is noted that survey data will be 'augmented with existing sources such as WeBS sector counts and the Fife Bird Report'. It is not clear how these data sources are intended to be used and combined in assessment. MSS advise that these points will require further discussion to reach agreement and should be addressed in the draft method statement (assuming this is to be prepared).
- Designated sites to be considered for ornithology are summarised in section 11.4.3 and Table 17. MSS note that in Table 17 the Forth Islands SPA is scoped out. MSS do not agree with this conclusion given the foraging range of many of qualifying features of the SPA (see Woodward et al. 2019) and thus we advise that Forth Islands SPA should be scoped in.

- NS state that they 'agree with the list of SPAs to be considered' (citing page 82 of the ESRR), however it would appear that NS agree with the longlist but not necessarily with the conclusions on sites to scope in/out (summarised in Table 17 of the ESRR). MSS advise that this point be clarified with NS to avoid potential ambiguity in interpretation of the NS consultation response. Subsequently in their advice on collision (Table 1, NS consultation response, Appendix B) and displacement/barrier effects (Table 2, op. cit.) NS provide a list of species and designated sites to be considered, this does include features of the Forth Islands SPA. MSS are in agreement with NS on the species/sites included in these two tables. However, MSS advise that black-legged kittiwake are also assessed for displacement (breeding season only) as well as collision.
- With regard to establishing baseline densities of birds for collision risk modelling (CRM), NS advise that it may be necessary to recalculate survey data based on the single turbine development area. While MSS agree that it would be appropriate to account for the development area being a subset of wider survey area, the approach to be taken must be carefully considered. Simply including only observations from a subset of the wider survey area (i.e. the development area) may lead to increased statistical error given the necessarily smaller number of observations when taking only a subset of the wider survey area. For species with lower encounter rates this could particularly affect results. As such it may be better to make density calculations based on the wider survey area. MSS recommend that, if following NS's suggestion to produce a draft method statement, then this point should be addressed in that document (or otherwise further discussed if a draft method statement is not produced).
- For collision assessment, NS advise using offshore (deterministic) Band CRM model but including the stochastic model (i.e. sCRM) for comparison. MSS are in agreement with this approach. NS also advise that CRM outputs are presented both using generic flight height distributions (i.e. Johnston et al. 2014 with corrigendum) and site specific flight heights. As the site specific flight height data were collected in flight height bands which do not directly correspond to the collision risk height zone of the current design specification MSS advise that the site specific data is used in a precautionary way, i.e. by including all birds for each height band that overlaps with collision risk height zone.
- The site specific flight height data were collected during the boat based surveys. Previously MSS asked how these flight height estimates would be validated; a response is provided (in Table 16) but this does not directly answer the query instead simply referring to the observers being 'very experienced ESAS surveyors'. MSS request that more detail is provided on this point in the EIAR to help in assessing the validity of this dataset for use in collision risk modelling.
- The current design specification (Table 15) is for a turbine with an 'air gap' (termed 'blade clearance to HAT' here) of 25 m. MSS note that in general as most bird flights are typically at low altitude, increasing the air gap is often a practical option for mitigation for collision risk. As such MSS suggest that increasing the air gap should be considered at an early stage.
- For displacement and barrier effects assessment during the breeding season NS recommend use of the SeabORD tool (Searle et al. 2018). While MSS do generally advise that the SeabORD tool should be used in displacement and barrier effects assessments, as the tool was developed with more offshore and array sized developments in mind it is not clear whether it is appropriate to use in the case of this single turbine development sited inshore. MSS advise that the suitability of the SeabORD tool for this application should be further discussed with NS and MSS.
- NS advise that (non-breeding) wader species from the Firth of Forth SPA can be scoped out given that these species are unlikely to make significant use of the development area (their key habitat being the intertidal zone). MSS support this view.
- For apportioning in the breeding season, NS advise using emerging Marine Scotland guidance for those species this tool is available for, MSS assume this is referring to Butler et al. (2020)[2]. For other species NS advice following the standard NS approach (NatureScot 2018). MSS would ordinarily support this approach for offshore wind developments. However, given the location and size of this development MSS note that an alternative approach may

[2] MSS note that the apportioning tool files for Butler et al. (2020) are not currently available via the Scottish Government website. However, MSS can provide these on request.

be appropriate in this specific case whereby all breeding birds are apportioned to the closest SPA (likely to be Forth Islands SPA for most species). MSS would welcome further discussion around this point with the Developer and NS.

- MSS are in general agreement with NS around their advice on population viability analysis (PVA). However, MSS note that NS advise that modelling is undertaken for two time periods (25 years and 50 years). Given that the proposed operational period be 25 years (table 1) MSS advise that it should be sufficient to only include PVA outputs for a 25 year time period. MSS advise that LOT seek clarification from NS on whether a 50 year period should also be assessed via PVA and if so the reasoning for this. MSS also suggest that the recommendations of Searle et al. (2020) are considered when developing PVA models.
- NS advise that PVA modelling should be completed both for impacts from the project alone and in combination with other Forth & Tay developments, here in brackets it says 'see below', however there does not appear to be any further relevant text on this beyond this point of the document. MSS advise LOT to seek clarification with NS in case a component of the NS response is missing here.
- For the Outer Firth of Forth and St Andrews Bay Complex SPA, NS state that assessment will be required of potential impacts on the supporting habitat for the species using this SPA. MSS are in agreement with this advice but note that given that this type of assessment is relatively novel the approach to assessing this would benefit from further discussion. It may be sufficient to make some form of qualitative assessment informed by the benthic surveys previously undertaken. The Developer propose to scope out indirect effects (Tables 22 and 23), which MSS does not support given the overlap with the Outer Firth of Forth and St Andrews Bay Complex SPA.

Marine mammals

MSS note that there will be no impact piling, and that the four pin piles or single monopile will be installed by drilling. MSS consider that disturbance due to underwater noise during the construction phase poses the only potential significant impact on marine mammals. As with NatureScot, we do not anticipate there to be an risk of auditory injury to cetaceans (European Protected Species) or seals if drilling (rather than impact pile driving) is used for pile installation, as is now planned.

The Scoping Report states that there are no additional geophysical surveys planned. A UXO survey is planned and MSS agree with NatureScot that the impact assessment should be included in the EIAR. MSS advise that for the assessment of underwater noise impacts in the EIAR, a suitable site specific, range dependent, underwater noise propagation model should be used. MSS would expect a detailed methodology and the assumptions used in the underwater noise modelling should be provided for transparency, to determine that the method used is appropriate to assess potential impacts. MSS are content to provide further advice on suitable underwater noise propagation modelling during the EIA stage of the project, particularly if there are any additional geophysical surveys and UXO clearance activities. The results from the underwater noise propagation modelling should be used to inform appropriate marine mammal mitigation measures proposed in the EIAR.

Section 11.4 - Baseline

MSS recommend that Table 17, which outlines the designated sites relevant to the project and their qualifying features, is updated so that the row providing information on the Isle of May SAC includes grey seals, the primary feature for which the site is designated.

With respect to the decline in the Firth of Tay and Eden Estuary SAC population of harbour seals, MSS, along with NatureScot, would welcome further discussion regarding agreement on the assessment process for this SAC population.

MSS acknowledge that the list of existing data sources is not exhaustive, and that the EIA will include a general literature review. MSS recommend Hague et al. (2020) and Russell et al. (2017) are included in the review. The former is a review of density estimates for all commonly occurring marine mammal species in Scottish waters and the latter represents the most up to date absolute abundance estimates for seals in Scottish waters. MSS note that the data sources and reports highlighted by NatureScot are appropriate, however there may be other suitable site-specific data

sources available. MSS would expect the applicant to identify these as part of their general literature review.

MSS note that in their advice, NatureScot recommend using the reference population sizes published in IAMMWG (2015). These abundance estimates have recently been updated (IAMMWG 2021), combining data from SCANS-III (Hammond et al. 2017) and ObSERVE (Rogan et al. 2018) surveys. MSS are in discussion with the authors of IAMMWG (2021) and NatureScot in regard to providing the details of the method used to integrate the two surveys, which are not presented in the updated report. However, in Appendix 1 of the IAMMWG (2021) report the abundance estimates from IAMMWG (2015) have been revised using the more robust modelling approach from SCANS-III. MSS recommend that the abundance estimates presented in Appendix 1 of the IAMMWG (2021) report are used in the meantime.

MSS advise that the best estimate of the Moray Firth SAC bottlenose dolphin population size is 224 (95% = 214 – 234). This is based on a five-year weighted mean population size using data from 2015 – 2019, which are presented in Arso Civil et al. (2021). This approach incorporates the variability in population estimates over this timeframe and has been discussed and agreed with University of Aberdeen and University of St Andrews, the two institutions involved in monitoring the population, and NatureScot. The workings for this calculation can be provided on request. MSS note that NatureScot recommend using the population estimate presented in Arso Civil et al (2021); we expect this is an oversight and suggest LOT clarify this with NatureScot prior to providing a response to the Scoping Report.

Section 11.5 – Marine Mammal Impact Assessment
MSS agree that bottlenose dolphins, harbour porpoise, grey seal and harbour seal should be scoped in the EIAR. MSS acknowledge that other cetacean species may occasionally occur within the Firth of Forth, but any mitigation measures put in place for bottlenose dolphin and harbour porpoise would be effective in reducing potential impacts on other cetacean species.

Section 11.5.4. – Bottlenose dolphin
MSS highlight that more recent, targeted studies in the Forth and Tay area have shown that the range of the Moray Firth SAC population of bottlenose dolphins has expanded southwards, and known individuals from this population are sighted in the Firth of Tay and the Firth of Forth (e.g., Arso Civil et al., 2019 and 2021). Consequently, MSS considers there to be connectivity of this SAC population along the entire east coast of Scotland, and would expect this to be taken in to consideration in the assessment.

Section 11.8 – Summary of Effects

- MSS agree with NatureScot that any pre-construction activity (such as geophysical surveys or UXO clearance) should be considered in the EIA rather than through post-consent applications.
- MSS agree with NatureScot that disturbance from underwater noise and vessel presence should be scoped in for pre-construction, construction and decommissioning phases.
- MSS agree with the applicant that cumulative effects should be scoped in for construction, operation and decommissioning phases. MSS recommend that cumulative effects should be also considered for the pre-construction phase, and that the projects to be included in the cumulative assessment are agreed in consultation with MS-LOT.
- MSS agree with the applicant that entanglement, changes in EMF and indirect effects (e.g., impacts on prey species) can be scoped out for all phases.

Marine fish ecology
MSS is content that the direct effect of the development site on spawning, nursery and foraging resource for fish and shellfish will be negligible, considering the development site has reduced in scale to a single turbine. However, MSS recommend that increased underwater noise effects are included in the scope for marine fish similar to marine mammals, as fish also have the potential to be negatively impacted from increased underwater noise from ~~piling and~~ construction activities. MSS also recommend that marine fish are included in the updated desk based assessment for marine mammals and given consideration to within any mitigation proposed.

MSS do not agree that EMF effect for the operation of the subsea cabling should be scoped out. MSS recommends that EMFF effects are scoped in and consideration is given to recent literature and research on the topic of EMF and potential effects on marine species. It is presumed that cable burial may mitigate EMF emissions, however recent research and modelling by Hutchison *et al.* 2021 has shown that burying the cable only increases the distance between the EMF source and the receptive species and although it may reduce the EMF emission, it is still perceivable by receptive species and may fall within the field of attraction for some species. MSS is keen to gain *in situ* measurements of EMF emissions from cables in order to validate models and inform environmental impact assessments. MSS would welcome involvement of the developer in any future strategic work on the topic of EMF.

MSS is content that accidental spillage of pollution is scoped out on the basis that a Pollution Prevention Plan will be implemented.

Commercial Fisheries
MSS have reviewed the Forthwind Environmental Scoping Report for Commercial Fisheries and considering that this new application is for one turbine fewer than previously consented, this will mean a smaller turbine area footprint and therefore a smaller impact on commercial fisheries. However, the potential for cable protection measures should burial of the export cable and met mast cable not be possible in some areas, is still of concern for fisheries, especially as most of the fishing that occurs in the area is trawling and dredging, with some creeling. MSS recommend mitigation measures such as over-trawl surveys to ensure that the area is still, as practically possible, safe for fishing to continue post cable installation.

Benthic ecology
MSS agree that benthic impacts can be scoped out with the exception of electromagnetic fields (EMF). The development is small scale and from the information presented, it is not in an area containing sensitive habitats. The seapens and burrowing megafauna biotope is located 2 km away and is unlikely to be affected. MSS agree that the other potential effects are already discussed in the 2015 ES.

MSS advise that EMF emitted during the operational phase from the export cable should be scoped in, either in the benthic ecology and/or the fish and shellfish section. This is because evidence for species effects is largely limited to mobile epifauna and fish. MSS advise that further information is provided primarily because the understanding of EMF has developed substantially since the original ES was written in 2015. There is growing evidence that even low levels of emissions (similar to background levels of geomagnetism) are perceivable to sensitive species and may result in behavioural responses (e.g. Hutchison et al. 2020). MSS acknowledge that there are few studies on species of relevance to Scottish waters that investigate species effects when exposed to low levels of emission. However, MSS advise that this uncertainty in impact should be acknowledged.

Diadromous Fish
The Firth of Forth, which is the estuary of the River Forth, is important for several diadromous fish species which migrate through the firth or feed in it. The main rivers they are associated with are the River Forth and its tributary the River Teith at the head of the firth.

MSS advise that diadromous fish should be scoped in. We do not agree with NatureScot that diadromous fish can be scoped out, nor do we agree with the statement by NatureScot that there will not be any likely significant effect on Atlantic salmon and sea lamprey. However, we are content with this statement being made for river lamprey which may not use the outer Firth of Forth to a significant extent.

To date, there has been no survey work within the Firth of Forth targeted at diadromous fish, so there is no information on migration routes within the firth and very limited information on the spatial distribution. As noted previously, the site may provide opportunities for useful studies to be carried out. MSS welcome that Forthwind are content to engage with ScotMER, where appropriate, in future monitoring work, but that due to the size and scale of the proposed development it is no longer

considered proportionate to include this aspect in the application. MSS would point the developer to the Diadromous Fish evidence map https://www.gov.scot/policies/marine-renewable-energy/science-and-research/ produced by ScotMER for further information

MSS welcome that the original fisheries assessment for salmon and sea trout will be updated in the EIAR. The most recent information is available at https://www.gov.scot/publications/salmon-fishery-statistics-2020/, https://www.gov.scot/publications/sea-trout-fishery-statistics-2020/ and https://www.gov.scot/publications/salmon-fishing-proposed-river-gradings-for-2021-season/.

Section 17.2 indicates that the developer intends to engage with the Association of Salmon Fishery Boards. As noted previously, this body no longer exists; it has been replaced by Fisheries Management Scotland (FMS) which represents many Salmon Fishery Boards and Fisheries Trusts. The local bodies are the Forth District Salmon Fishery Board and the Forth Rivers Trust.

MSS do not agree with EMF being scoped out for diadromous fish, which may make use of geomagnetic cues to navigate. This will need consideration in the EIAR.

Aquaculture
MSS have considered the request and have no comment to make at this stage on what should be included in the scoping exercise with regard to aquaculture. Details on the location of nearby aquaculture sites will be provided during the application consultation process.

Physical Environment/Coastal Processes
No comments have been provided.

Chemistry
No comments have been provided.

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Hopefully these comments are helpful to you. If you wish to discuss any matters further then please contact the REEA Advice inbox at MSS_Advice@gov.scot

Yours sincerely,

Renewable Energy Environmental Advice group
Marine Scotland Science

[Redacted]

From: NATS Safeguarding <NATSSafeguarding@nats.co.uk>
Sent: 31 August 2021 14:54
To: MS Marine Renewables
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021 [SG08970]

Follow Up Flag: Follow up
Flag Status: Completed

Our Ref: SG08970
Dear Sir/Madam
The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.
However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.
If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.
Yours faithfully

NATS Safeguarding

E: natssafeguarding@nats.co.uk
4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 25 August 2021 16:27
Cc: [Redacted] @gov.scot; [Redacted] @gov.scot
Subject: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021
Dear Sir/Madam,
THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 ("the MW EIA Regulations")
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 2017 ("the EW EIA Regulations")
Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil
In respect of the proposed marine licence and section 36 applications for the above works under the Marine (Scotland) Act 2010 and the Electricity Act 1989, Forthwind has requested the Scottish Ministers adopt a scoping opinion in relation to the above proposed works under Regulation 14(1) of the MW EIA Regulations and Regulation 12(1) of the EW EIA Regulations.
The scoping report submitted by the applicant can be found at: https://marine.gov.scot/node/21519
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 their proposed marine licence applications, 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.

The scoping request includes a description of onshore infrastructure and indicates that the previously granted deemed planning permission will be used in respect of the proposed development. Please be advised that there is a likelihood that a new deemed planning will be required. MS-LOT would therefore be grateful if consultees could confirm, if applicable, whether they are content that the onshore aspects are scoped out of proposed EIA report based on the information given in the scoping request should a new deemed planning be required.

Previous application and EIA documentation submitted in 2016 pertaining to the existing s.36 consent and marine licences referred to within the scoping request is available to download here.

Please submit your response electronically to ms.marinerenewables@gov.scot by 24 September 2021. 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.

Yours faithfully,

[Redacted]

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

Covid-19: Marine Scotland - Licensing Operations Team (MS-LOT) is working from home and, as a result, determination of applications may take longer than our stated timelines. In addition, MS-LOT is unable to respond to phone enquiries. Please therefore communicate with MS-LOT via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries.

Frequently Asked Questions

[Redacted]

Date: 11 October 2021

Marine Scotland – Licensing Operations Team

Our ref: CNS/ REN/ OSWF/ Demonstrator sites/Forthwind/

By email only:

[Redacted] @gov.scot

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MS.MarineRenewables@gov.scot

Dear [Redacted]

Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil

NatureScot Scoping advice

Thank you for consulting NatureScot[1] on the scoping report submitted by Forthwind Ltd. We provide our advice on the natural heritage interests to be addressed within the Environmental Impact Assessment Report (EIAR) and Habitats Regulations Appraisal (HRA) for the proposed, revised Forthwind Offshore Wind Demonstration Project, located 1.5 km off the Fife coastline at Methil.

This revised proposal comprises:

- a single 3-bladed demonstration turbine in the 12MW+ size category with an operational period of 25 years;
- which will have rated power of up to 20MW, a rotor diameter of up to 255m and maximum blade tip height of 280m;
- installed via 4 pin piles or monopile foundations; and
- a single met mast also on 4 pin piles or monopile foundations.

Background

Several previous demonstration schemes have been proposed at this location:

- 2 turbine, 2-bladed lattice tower array (2016) – consented but not constructed;
- 9 turbine, 3-bladed array (2017) – scoping process initiated but not completed; and
- 2 turbine, 3-bladed array (2019) – scoping opinion produced by Marine Scotland LOT, but now lapsed.

[1] NatureScot is the operating name for Scottish Natural Heritage

Policy context

NatureScot works in support of the Scottish Government's vision for an energy sector that delivers secure, affordable and clean energy for Scotland[2]. We provide advice in the spirit of Scotland's National Marine Plan[3] and Sectoral Marine Plan[4]s for Offshore Wind, which balance the promotion of the sustainable development of offshore wind, whilst protecting our biodiversity and taking account of seascapes, landscapes and visual impacts.

Working within the context of a climate emergency and a biodiversity crisis, we wish to provide advice that is enabling and secures the right development in the right place with most benefit for climate change reduction, and takes account of and lessens impacts in respect of the biodiversity crisis.

Scoping Report

In providing advice to help support the government's vision, we are keen to engage early with developers and welcome this opportunity to provide advice for scoping this new proposal. We highlight the extensive previous engagement and advice provided to the applicants and to Marine Scotland for proposals at this location. The current scoping exercise relies heavily on work undertaken in support of previous proposals. We advise that some of the datasets used in previous assessments may reach the end of their lifespan soon and may require updating with new surveys. We would welcome further discussion on this issue.

As the design envelope considers two different options for the foundations, there should be clarity in the assessment process on whether each piling option will be assessed and / or whether one piling option is considered the worst-case scenario and only that option will be assessed.

Assessment approach

The EIAR should consider the impact of all phases of the proposed development on the receiving environment, including effects from pre-construction activities and decommissioning as well as the construction and operation phases.

We advise that the use of any design envelope should be refined as much as possible prior to the submission of the application so that the EIA Report (EIAR) presents and assesses a realistic worst-case scenario.

Due to previous assessment and advice, we provide advice only on those aspects which we consider to be significant and require assessment as part of the EIA and HRA processes going

[2] Scottish Government Energy Strategy 2017: https://www.gov.scot/Publications/2017/12/5661/3
[3] https://www.gov.scot/Publications/2015/03/6517
[4] Sectoral Marine Plan for Offshore Wind – published 2020 https://www.gov.scot/publications/sectoral-marine-plan-offshore-wind-energy/ and draft Sectoral Marine Plan for Innovation and targeted Oil and Gas decarbonisation offshore wind https://consult.gov.scot/marine-scotland/smp-innovation-and-targeted-oil-and-gas/

forward. Where we are able at this stage to advise on impact assessment methods, this has been provided, as detailed below:

- Seascape, landscape and visual impact – please see **Appendix A**
- Ornithology – please see **Appendix B**
- Marine mammals (underwater noise only) – Please see **Appendix C**
- Other natural heritage interests – please see **Appendix D**.

Habitats Regulations Appraisal (HRA)

An HRA Report should be presented alongside the EIA Report, however the EIA scoping report does not include an HRA screening exercise. We advise the applicants to review our advice on European sites and HRA from previous proposals at this location, and to prepare a draft HRA Report for informal consultation prior to formal submission to Marine Scotland. We acknowledge this work has started – email from Cierco, dated 22nd September and subsequent request for a meeting.

We provide advice on European sites in the appendices to this letter, to assist in the preparation of an HRA Report.

Cumulative and in-combination effects

We advise those other projects and plans to be considered in the cumulative and in-combination assessment should be agreed in consultation with Marine Scotland and other Regulators.

Mitigation and monitoring

The EIAR should contain a schedule of commitments detailing all proposed mitigation as well as a draft Project Environmental Monitoring Plan (PEMP). The proposed PEMP should provide details on mitigation measures and any monitoring studies to be undertaken and at which stage of the development, if consented, including pre-construction, construction, operation / maintenance and decommissioning.

Further information and advice

NatureScot can provide further advice on natural heritage interests, at appropriate stages, as work is undertaken by the applicant in support of their formal submission. We are happy to discuss further any aspect of our advice prior to and after the issue of a formal scoping opinion. Please contact myself, [Redacted] , or [Redacted] in the first instance for any further advice.

Yours sincerely,

[Redacted]

@nature.scot

Appendix A - Seascape, landscape and visual impacts to be addressed in the EIAR

Seascape, landscape and visual interests are addressed in chapter 9 of the Scoping Report. We highlight the following aspects of the current proposal:

- The reduction in array size to a single turbine may simplify some seascape, landscape and visual impacts; however
- at 280m, over 70m taller than the towers of the Queensferry Crossing (c207m), the proposed turbine will be widely eye-catching and will significantly affect the distinctive regional character of the landscapes and seascape of the Firth of Forth; and
- there will likely be significant cumulative issues resulting from the greater overall scale of the turbine in relation to the existing and consented turbines and with other tall structures in the area.

Proposed methodology

We are not intending to make substantive comments on the draft SLVIA methodology, instead we highlight good practice is to follow the Guidelines for Landscape and Visual Impact Assessment (GLVIA version 3 (para. 1.20) which indicates that it is the primary responsibility of the landscape professional to ensure that the approach and methodology adopted are appropriate to the circumstances. NatureScot has produced guidance on scoping for offshore renewables *Offshore Renewables – guidance on assessing the impact on coastal landscape and seascape Guidance for Scoping an Environmental Statement* (2012)[5] and on *Visual Representation of Wind Farms version 2.2* (2017)[6]. The turbine now being proposed is considerably larger than the consented turbine(s) and in this regard, we advise that a SLVIA is required to inform and support the new application. We welcome the applicant's intention to do so.

Zone of Theoretical Visibility (ZTV) and Study Areas

The table at paragraph 48 in our guidance *Visual Representation of Wind Farms* advises that turbines >150m require a 45km ZTV. The guidance also states "…greater distances may need to be considered for the larger turbine used offshore". Accordingly, for a 280m turbine we advise that an appropriate initial ZTV is at least 60km.

In keeping with our advice for the 2019 proposal we consider it would be helpful to explore the changes in visibility from use of larger turbines. In this regard, we suggest that the increase in turbine size could be modelled in appropriate increments (determined by the design process) with the outputs presented on a composite ZTV, or perhaps as individual ZTVs. These could then be compared against the ZTV for the consented scheme which may help us understand if there is any 'step change' to the amount or range of visibility.

[5] https://www.nature.scot/sites/default/files/2018-11/Guidance%20-%20Offshore%20Renewables%20-%20assessing%20the%20impact%20on%20coastal%20landscape%20and%20seascape%20-%20Guidance%20for%20scoping%20an%20Environmental%20Statement.pdf

[6] https://www.nature.scot/sites/default/files/2019-09/Guidance%20-%20Visual%20representation%20of%20wind%20farms%20-%20Feb%202017.pdf

For turbines of this height we consider that significant effects can potentially occur beyond 50km. Given the landscape / seascape context of the proposal we advise the use of a 60km study area (rather than a 50km study area as identified in the scoping report). We advise that particularly sensitive visual receptors may be located on or just beyond the boundary of the ZTV. These should be identified and Local Authorities will be able to advise further.

We note the proposal that the SLVIA focuses on a 25km inner study area and in the interest of a proportionate assessment we provisionally agree. However given the turbine height and its context in a regionally distinctive landscape and seascape we advise that the inner study area should be flexible enough to extend to include sensitive receptors beyond the 25km distance, should these emerge, and we might request further detailed assessment as the SLVIA progresses.

Viewpoints

The proposed turbine is in the same location as the consented scheme, we therefore agree that baseline viewpoint photography from these viewpoints can be used for the photomontages in the EIAR. Any material changes in the baseline views will be identified and highlighted during survey work. If there are any material changes in the baseline view the need for updated photography can be agreed, if necessary, on a case-by-case basis.

We note that new viewpoint photographs will be undertaken for a number of additional viewpoints and for the three proposed night-time viewpoints, from where a photograph is not currently available.

The existing Levenmouth Demonstration Turbine by Methil (196m) and the towers of the Queensferry Crossing (c200m) are widely eye-catching and it is clear that the considerably taller proposed turbine is likely to become a new focal point in views within and across the Firth of Forth. A hub height ZTV would have helped to identify potential viewpoint locations. We suggest the following broad locations are explored for additional viewpoints:

- Beyond the immediate coastal plains and settlements of East Lothian – such as the foothills of the Lammermuirs;
- Roads from where the proposal will be seen in 'straight-ahead' views as well as roads parallel to the coast. The view from the A68 is an important gateway view across the Forth en route to Edinburgh from the south. The turbine would be seen in the context of the islands in the Firth as well as the Fife hills including in particular the landmark hills of East and West Lomond;
- An elevated viewpoint in the Pentlands;
- The railway line between Kirkcaldy and Glenrothes from where the turbine might be seen in the context of Earlsseat wind farm as well as the single turbines at the coast.

We also suggest that a viewpoint is considered on Arthurs Seat which at 250m (150m higher than Calton Hill, viewpoint 22) is roughly the same height AOD as the top of the blades. An initial wireline to show comparison with Calton Hill would be useful.

Lighting

We welcome a 50km study area proposed for the night-time lighting assessment. A hub height ZTV would have clarified those locations from where the nacelle light would theoretically be visible.

Wirelines from a range of viewpoint locations would help to inform the selection of viewpoints and we would welcome further discussion on viewpoint selection. The assessment of night time lighting should follow our guidance in Annex 2 of *General Pre-application and Scoping Advice for Onshore Wind Farms*[7] which also references paras 2.11-2.13 of our *Siting and Designing Wind Farms in the Landscape* guidance (version 3a, 2017) and paras 174-177 of our *Visual Representation of Wind Farms*. It is important to make the distinction between the 'illustration' of lighting as advocated in our guidance in typically twilight conditions (low light levels at dusk/dawn), and the 'assessment' of lighting required through the SLVIA which will be wider and include twilight and night time conditions.

Coastal character – baseline information

We note and welcome the proposal (para 9.5.1) to draw on and update where required the local seascape character units identified by Forthwind in relation to the Forthwind Offshore Wind Demonstration Project (July 2015) and the regional characterisation undertaken by the Forth and Tay offshore wind developers' group (FTOWDG, 2011). We refer the applicant to our relevant guidance: *Offshore Renewables – guidance on assessing the impact on coastal landscape and seascape and Guidance Note Coastal Character Assessment* (Version 1a - July 2018).[8]

Cumulative impact assessment

The cumulative assessment should be proportionate and focus on those onshore and offshore projects with which there are likely to be significant effects. We advise that the relevant local authorities will be able to provide up-to-date information on current onshore wind farms within the study area. For offshore schemes this consideration should extend to the consented and proposed wind farms in the outer Firth of Forth.

[7] https://www.nature.scot/doc/general-pre-application-and-scoping-advice-onshore-wind-farms
[8] https://www.nature.scot/sites/default/files/2018-07/Guidance%20Note%20-%20Coastal%20Character%20Assessment.pdf

Appendix B – Ornithology impacts to be addressed in the EIAR

In our view, the scoping report does not provide a clear account of how impacts to ornithological interests will be addressed for this new application. We have therefore sought to provide below our initial thinking on how Forthwind can make best use of their existing data to assess impacts to key natural heritage features using the most appropriate methods. However, we strongly advise the need for further pre-application dialogue with Forthwind in order to agree (in writing) a draft method statement for ornithological impact assessment prior to submission of the application.

SURVEY DATA

Given the multitude of previous surveys and collection, we recommend that consideration is given to how previous / new concerns around some of the issues are to be addressed e.g.:

- Use of boat based surveys - sensitivity to boat disturbance - coverage
- Bird flight heights – height of new proposed turbine
- Timescale and agreement on age of data and its suitability

We advise that the previous Vantage Point survey information is now likely to be out of date and not suitable for current bird impact assessments.

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) / HABITATS REGULATIONS APPRAISAL (HRA)

We agree with the list of SPAs (page 82) that will need to be considered due to the potential for connectivity between the development and the site. This is because of the potential for impacts from collision, displacement / barrier effects and impacts on supporting habitats. Further information on SPAs, including their conservation objectives, is available from:

https://sitelink.nature.scot/home

- **Collision risk**

We note the intention to use the stochastic Collision Risk Model (sCRM).

Having reviewed the boat-based survey flight heights provided in Appendix C of the scoping report, we have identified those species outlined in Table 2 below with flight heights overlapping with the currently proposed rotor swept zone and as such require consideration for potential collision risk assessment. This long-list is based on the data provided. Other species may need to be considered. Both whooper swan and pink-footed goose have been included at this stage as we are unclear whether the flights recorded represent regular or migratory movements. In our view migratory movements can be scoped out, as there is an ongoing MS led project looking at updating CRM for migratory species due to report this financial year. If movements were not migratory, but daily feeding / roosting movement we would expect these species to be included in the CRM.

Table 1 – Species/sites for which collision risk assessment should be considered

Species	Designated site	Season[9]
Common tern	• Forth Islands SPA • Outer Firth of Forth and St Andrews Bay Complex (OFFSABC) SPA	• Breeding • Breeding
Northern gannet	• Forth Islands SPA • OFFSABC SPA	• Breeding • Breeding
Herring gull	• Forth Islands SPA • OFFSABC SPA	• Breeding • Breeding and non-breeding
Black-legged kittiwake	• Forth Islands SPA • OFFSABC SPA	• Breeding • Breeding and non-breeding
Lesser black-backed gull	• Forth Islands SPA	• Breeding
Sandwich tern	• Firth of Forth SPA • Forth Islands SPA	• Passage • Breeding
Black-headed gull	• OFFSABC SPA	• Non-breeding
Common gull	• OFFSABC SPA	• Non-breeding
Whooper swan	• Loch Leven SPA	• Non-breeding
Pink-footed goose	• Loch Leven SPA • Cameron Reservoir SPA	• Non-breeding • Non-breeding

We are mindful that bird survey data collected for the 9 turbine proposal covers a larger area than the current proposal being scoped and as such some recalculation of the survey data based on the single turbine development area and buffer may be necessary. We recommend that the survey data is revisited and split according to the GPS tracks from the survey vessel. We would be happy to discuss this further if this would be helpful.

We advise the offshore (deterministic) Band model should be used to estimate collision risk and refer Forthwind to the joint SNCB guidance on the use of avoidance rates in collision risk modelling. To enable a comparison with the stochastic model, it would be possible to use the Bowgen and Cook (2018)[10] calculated rates. Neither these nor the revised rates calculated for the Cook (2021)[11] report have been formally adopted by NatureScot. Use of 'Avoidance Rates' from those publications should be used with that caveat. However, we believe that useful discussion can be had based on results of CRM run using these values. Biological parameters and model options should be discussed and agreed in consultation with Marine Scotland.

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[9] Guidance of seasonal definition for each species can be found on our website: https://www.nature.scot/sites/default/files/2018-11/Guidance%20-%20Suggested%20seasonal%20definitions%20for%20birds%20in%20the%20Scottish%20Marine%20Environment.pdf

[10] Bowgen, K. & Cook, A., (2018), Bird Collision Avoidance: Empirical evidence and impact assessments, JNCC Report No. 614, JNCC, Peterborough, ISSN 0963-8091.

[11] https://www.bto.org/our-science/publications/research-reports/additional-analysis-inform-sncb-recommendations-regarding

We are aware of differences observed in Forthwind's site-specific flight heights, compared to the generic flight height distributions recommended for use in the offshore Band model (Johnston *et al*. 2014)[12]. Given the proximity to the coastline, which may result in different bird flight behaviour than in the offshore environment, we advise of the need for a comparison of collision risk estimates between outputs using site-specific flight height data and the Johnston *et al*. 2014 generic flight height distributions to be provided in the application.

- **Displacement / barrier effects**

We refer Forthwind to the joint SNCB displacement advice note[13] for details and Table 3 below for those species / sites to be assessed for displacement / barrier effects. A displacement rate of 60% should be used for auk species, with a mortality rate of 2% for puffin and 1% for guillemot and razorbill. The same rates should be used for immatures as for adult birds. As per the SNCB advice note, displacement rates should be presented in a matrix ranging from 0-100% in 10% increments.

We recommend the use of the SeaBORD tool (Searle et al. 2018)[14] for assessing barrier/ displacement during the breeding season for guillemot, razorbill and puffin. The displacement rate and mortality rates to be used should be discussed and agreed in consultation with Marine Scotland. For the non-breeding season, population sizes should be derived from the zones determined by the BDMPS Report (Furness, 2015)[15]. The exception to this being guillemot where the population and impacts should be based on an assessment area derived from the breeding season foraging range.

To date in Scottish casework, there has been no need to establish displacement rates for seaducks, divers and shags. We are discussing this with the other SNCBS and will provide further advice as soon as possible.

NatureScot advise further discussion around an appropriate buffer specifically for red-throated diver and common scoter.

Table 2 - Species / sites to be assessed for displacement / barrier effects

Species	Designated site	Season
Common scoter	• Firth of Forth • OFFSABC SPA	• Non-breeding • Non-breeding
Long-tailed duck	• Firth of Forth • OFFSABC SPA	• Non-breeding • Non-breeding
Red-breasted merganser	• Firth of Forth • OFFSABC SPA	• Non-breeding • Non-breeding

[12] Johnston, A., Cook, A.S.C.P., Wright, L.J., Humphreys, E.M. & Burton, N.H.K. 2014a. Modelling flight heights of marine birds to more accurately assess collision risk with offshore wind turbines. Journal of Applied Ecology 51, 31-41.
[13] Joint SNCB Interim Displacement Advice Note 2017 - http://data.jncc.gov.uk/data/9aecb87c-80c5-4cfb-9102-39f0228dcc9a/Joint-SNCB-Interim-Displacement-AdviceNote-2017-web.pdf
[14] K R Searle, D C Mobbs, A Butler, R W Furness, M N Trinder and F Daunt. (2018). Finding out the Fate of Displaced Birds
[15] Furness, Robert. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Report. 164.

Red-throated diver	• Firth of Forth • OFFSABC SPA	• Non-breeding • Non-breeding
Velvet scoter	• Firth of Forth • OFFSABC SPA	• Non-breeding • Non-breeding
Common eider	• Firth of Forth • OFFSABC SPA	• Non-breeding • Non-breeding
Razorbill	• Forth Islands SPA	• Breeding
Common guillemot	• Forth Islands SPA • OFFSABC SPA	• Breeding • Breeding & non-breeding
Atlantic puffin	• Forth Islands SPA • OFFSABC SPA	• Breeding • Breeding
Slavonian grebe	• Firth of Forth • OFFSABC SPA	• Non-breeding • Non-breeding
Goldeneye	• Firth of Forth • Loch Leven SPA • OFFSABC SPA	• Non-breeding • Non-breeding • Non-breeding
European shag	• Forth Islands SPA • OFFSABC SPA	• Breeding • Breeding & non-breeding
Northern gannet	• Forth Islands SPA • OFFSABC SPA	• Breeding • Breeding

We suggest that the (non-breeding) wader species from the Firth of Forth SPA can be scoped / screened out. These species are unlikely to utilise the development area to any large extent as they use the intertidal zone to forage. There is therefore unlikely to be any impact from collision or displacement effects.

- **Apportioning**

In order to consider any population consequences arising from displacement and estimated collisions, the overall impacts will need to be apportioned by season, between SPAs and across age classes. Age class apportioning should be based on stable age population models.

Breeding season

Emerging Marine Scotland guidance (due to be published imminently) should be used for guillemot, razorbill and (and shag, if required) and for all other species that require detailed consideration in the assessment we advise use of our (2018) interim guidance.[16]

Non-breeding season

The BDMPS Report (Furness, 2015) should be used for species where the majority of birds are wintering elsewhere rather than in the northern North Sea. Further discussion will be needed to finalise the approach, with respect to birds who largely remain in the northern North Sea during

[16] NatureScot (SNH) guidance on apportioning breeding season impacts - https://www.nature.scot/interim-guidance-apportioningimpacts-marine-renewable-developments-breeding-seabird-populations

the non-breeding season, but at present if non-breeding season assessment of displacement of guillemot is required, then we would wish to see the non-breeding season population defined in terms of the mean maximum foraging range (Woodward et al. 2019).[17]

- **Population consequences (PVA)**

The impacts of collision and displacement will need to be considered in the context of relevant SPA breeding colonies particularly where the assessed effects exceed a change to the adult annual survival rate of 0.2%. Where apportioned impacts are large and / or the SPA populations are small, it is likely that population models will be required to establish whether or not there could be long-term impacts on population viability. As well as modelling the individual impact of this proposal, we expect modelling for cumulative impacts with the other Forth & Tay developments (see below).

Type of model

We recommended the Natural England (NE) PVA tool is used.[18]

We request that the modelling of impacts is undertaken over two time periods:

- 25 years; and
- 50 years

This is due to increased uncertainty in interpreting outputs from model predictions further than 25 years ahead. No recovery period should be applied to either model run. Impacts should be applied to all ages in agreement with the age apportioning approach, and sabbatical rates of adult birds should be taken into account.

We highlight that it is more difficult to make predictions over a longer time-frame as uncertainty in the model outputs increases with the length of model run. For SPA seabird species this may make it harder to conclude no long-term impacts on population viability and no adverse impact on site integrity.

PVA metrics to be presented

We advise the two ratio metrics[19] which are generally termed 'Counterfactual (ratio) of final population size' and 'Counterfactual (ratio) of population growth-rate' should be presented.

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[17] 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 number 724

[18] Searle, K., Mobbs, D., Daunt, F. & Butler, A. 2019. A Population Viability Analysis Modelling Tool for Seabird Species. Natural England Commissioned Reports, Number 274. http://publications.naturalengland.org.uk/publication/4926995073073152 also see https://github.com/naturalengland/Seabird_PVA_Tool

[19] Cook, A.S.C.P. & Robinson, R.A. 2016. Testing sensitivity of metrics of seabird population response to offshore wind farm effects. JNCC Report No. 553. JNCC, Peterborough

- **Impacts on supporting habitats**

Assessment of potential impacts on supporting habitats should focus particularly on those species of the Outer Firth of Forth and St Andrews Bay Complex SPA occurring in the nearshore environment that were observed within the site in notable numbers. This will be a new aspect to be considered in the assessment in light of the status of this site which has since changed to receive full policy protection. Assessment methods will require further discussion and agreement. We have recently commissioned a project aiming to map supporting seabed habitats within the Moray Firth SPA and Outer Firth of Forth and St Andrews Bay Complex SPA. The project is not yet completed but outputs may be relevant to support assessment of potential impacts and we will share findings from this work as it becomes available.

Appendix C – Marine Mammal Advice

We advise that underwater noise is the key impact pathway that may raise significant effects for cetaceans and seals during wind farm construction and cable installation. Consideration of this impact will inform the assessment process for both the Habitats Regulations Appraisal[20] and future European Protected Species (EPS) licensing requirements[21,22] (if consented).

Habitats Regulations Appraisal (HRA)

We agree with the list of SACs (page 82 of Scoping request) that will need to be considered under HRA due to potential for connectivity between the development and the site with respect to impacts from underwater noise including cumulative effects.

Further information on SACs, including their conservation objectives, is available from:

https://sitelink.nature.scot/home

Estimates for seal populations by Management Areas are provided in the latest SCOS report[23].

Key species

We are aware that the IAMMWG (2015)[24] MU abundance estimates are currently being updated by JNCC et al. however please note the MU boundaries are not currently being revised. Abundance estimates have been updated recently for some cetacean MUs in Scottish waters, a summary can be found in Table 3 of the recently published Regional Baselines Report[25].

- **Harbour porpoise**

For harbour porpoise, we advise that the reference population against which to judge impacts under EPS licensing is that of the North Sea MU (IAMMWG, 2015). The population abundance estimate has recently been updated – please refer to Regional Baselines Report. Recent data from the Small Cetaceans in European Atlantic waters and the North Sea survey (SCANS III)[26] can be used to consider impacts at a regional scale – please refer to survey block R (east coast). Predicted density surface for harbour porpoise within Scottish waters has been provided as part of the Regional Baselines report using SCANS III survey data.

- **Bottlenose dolphin**

[20] https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra
[21] https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations/european
[22] https://www2.gov.scot/Resource/0044/00446679.pdf
[23] https://www.smru.st-andrews.ac.uk/research-policy/scos/
[24] IAMMWG. 2015. Management Units for cetaceans in UK waters (January 2015), JNCC Report No. 547
[25] E L Hague, R R Sinclair and C E Sparling. 2020. Regional baselines for marine mammal knowledge across the North Sea and Atlantic areas of Scottish waters. Scottish Marine and Freshwater Science Vol 11 No 12.
[26] Hammond et al. 2017. Estimates of Cetacean Abundance in European Atlantic Waters in Summer 2016 from the SCANS-III Aerial and Shipboard Surveys.

For bottlenose dolphin we advise that there is connectivity with both the cable route and wind farm array area and the Moray Firth Special Area of Conservation (SAC). The reference population against which to judge impacts under HRA and EPS licensing is that of the Coastal East Scotland MU (IAMMWG, 2015) and we advise using Arso Civil et al. (2021)[27] for the most up-to-date population estimate.

- **Grey seal**

For grey seal, we advise that there is connectivity with the Isle of May SAC. For grey seals, SACs were designated on the basis of the numbers of pups born during the breeding season and therefore the reference population should be the wider pup production areas. The Isle of May SAC (IOM) falls into the North Sea pup production area. As this is a large area, we recommend the use of the Firth of Forth area for the IOM (see SCOS 2020). A summary of the most up-to-date abundance estimates can be found in Table 2 of the Regional Baselines report. Consideration of non-breeding season impacts (particularly underwater noise) may also be required for grey seal.

- **Harbour seal**

For harbour seal we advise there is connectivity to the Firth of Tay and Eden Estuary SAC.

There has been a serious decline in this population – East Scotland seal management unit (SMU) as defined by SCOS 2020. We advise further discussion is needed to agree the assessment process for this species.

- **Designated seal haul out sites**

Disturbance of grey and harbour seals at haul outs is unlikely given the distance to the nearest haul outs. Impacts to seals at haul outs designated under the Marine (Scotland) Act 2010 can therefore be scoped out.

- **European Protected Species**

All cetaceans (species of whale, dolphin and porpoise) are classed as European protected species. We advise the main species to be considered are bottlenose dolphin and harbour porpoise noting that the likelihood of other cetacean species being in the vicinity of the development is low. However, the occasional visit from rarer species cannot be ruled out.

Any mitigation that is put in place to protect bottlenose dolphin and harbour porpoise will also reduce any impacts on other cetacean species that may be in the area.

[27] Arso Civil, M., Quick, N., Mews, S., Hague, E., Cheney, B.J., Thompson, P.M. & Hammond, P.S. 2021. Improving understanding of bottlenose dolphin movements along the east coast of Scotland. Final report. Report number SMRUC-VAT-2020-10 provided to European Offshore Wind Deployment Centre (EOWDC), March 2021 (unpublished).

Key impact pathways

We broadly agree with potential impacts to be scoped in and out (as per page 97, and Table 23) and provide below some additional advice on these together with a number of elements which we notice are missing.

- **Pre-construction noise impacts**

There are a range of activities likely to be undertaken during the pre-construction period which can emit significant underwater noise e.g. UXO clearance and some geophysical surveys. Impacts will require consideration under EPS licensing and potentially in combination with other noisy activities depending on the noise outputs, timings and duration. These should be considered in the EIAR rather than post-consent.

- **Foundation installation methods**

Underwater noise is also likely to be generated from foundation installation using impact piling driving as well as other methods such as drilling. The EIAR therefore needs to assess the likely disturbance effect which will inform HRA and EPS licensing requirements.

The Scoping Report states (e.g. Table 7) that impact piling will not be used and that piles will be installed by drilling only – our advice here is based on this piling method, and if there is a later change to other piling methods then impacts on species must be reassessed.

We are content that the drill-only method is unlikely to produce noise levels that would cause auditory injury to any European Protected Species or to seals. No specific mitigation is required for this method.

- **Disturbance from increased vessel presence**

Disturbance from vessel noise and presence should both be considered in relation to each of the key species listed above. It will be important to understand the likely level and effect of such disturbance and whether it could result in population level effects on marine mammals.

- **Decommissioning impacts**

Decommissioning impacts should be assessed with as close to full removal of all deposits as possible, in line with draft MS decommissioning guidance.

Appendix D – Consideration of other natural heritage interests

We anticipate that all other natural heritage interests will not require detailed assessment within the EIAR as any residual impacts can be dealt with through consideration in post consent plans (if consented) particularly the Construction Method Statement and Cable Plan for aspects such as the export cable installation.

We also highlight a few aspects for which further clarification is needed.

MARINE NON-NATIVE SPECIES

Invasive non-native species in our seas can have significant impacts on both biodiversity and the economy. Construction and operating renewable devices provide clean surfaces for settlement of native and non-native species[28], potentially providing 'stepping-stones' around our coast. The movement of vessels, barges, equipment and renewable devices themselves, both around the UK coast and internationally, could also allow the accidental transfer of invasive non-native organisms. Marine biosecurity planning is therefore a critical step in creating a framework to reduce the risk of introduction.

Since the previous assessment (July 2015 ES), a non-native seaweed, *Undaria pinnatifida* has been found in the Firth of Forth. This is a large, invasive species which could establish on the turbine bases. Consideration of this and other species should therefore be given through:

- A biosecurity plan detailing best-practice steps to be taken to manage these risks and to minimise the transfer and spread of marine invasive non-native species. This should form part of the project PEMP and should include the Check Clean Dry principles[29].
- Biofouling management practices should be implemented, including the use of antifouling and/or foul-release systems and other operational management practices to reduce the development of biofouling.

Although guidance specific to the renewables industry is yet to be produced, guidance for other related industries will be useful in identifying ways to minimise risks. For example:

- The Code of Practice published by the Scottish Government on non-native species to provide guidance on the recently amended legislation in Scotland. This CoP came into effect on 2 July 2012 and applies in Scotland only[30].
- Guidelines produced by The International Maritime Organisation (IMO) provide useful recommendations on general measures to minimise the risks associated with biofouling for all types of ships[31].

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[28] https://www2.gov.scot/Topics/marine/marine-environment/species/non-natives

[29] http://www.nonnativespecies.org/checkcleandry/

[30] www.scotland.gov.uk/Resource/0039/00393567.pdf

[31] 2011 guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species. Resolution MEPC.207(62). MEPC 62/24/Add.1 Annex 26. Adopted 15 July 2011. Available at: www.mardep.gov.hk/en/msnote/pdf/msin1136anx1.pdf

- Guidance produced for the prevention and management of invasive species in the oil and gas industry[32].

HYDRODYNAMIC PROCESSES & COASTAL GEOMORPHOLOGY

We note from the scoping report that potential impacts on hydrodynamic processes and coastal geomorphology will be considered as part of the Physical Processes and Water Quality assessment. We advise that depending on the location of the landfall, that future proofing for coastal change impacts due to climate change are considered as part of the design process and through post consent plans (if consented).

- **East Wemyss to Buckhaven Coast GCR / Firth of Forth SSSI (geological features)**

Figure 12 on page 123 provides an indicative layout of the onshore works including the cable land fall. This figure contains sufficient detail to confirm the location of the cable corridor route in relation to East Wemyss to Buckhaven Coast GCR site, which is a designated feature of the Firth of Forth SSSI.

The landfall corridor lies over 300 m north east of the east end of the GCR site. There will be no direct or indirect impacts on the GCR site or geological features of the Firth of Forth SSSI as a result of this proposal.

- **Coastal change impacts**

As part of the design, we advise of the need to consider coastal change impacts due to climate change. We note from section 4.3.11 page 32 that a pull through trench will be used for landfall and that the option of HDD which was considered in the previous July 2015 ES has been removed. Those options taken forward in the application must future-proof against impacts through coastal change brought about by climate change, including consideration of cable protection in the inshore environment and the potential for further disturbance due to remedial works if it becomes exposed. Further information including guidance can be found on our website[33] and via the Dynamic Coast[34] project. This provides a mapping tool that uses recent coastal erosion to project landwards to suggest where the shoreline may be in 2050.

FISH OF CONSERVATION CONCERN

We have no significant issues to raise in relation to fish (including diadromous fish) and agree that impacts on diadromous fish and marine fish Priority Marine Features (PMFs) can be scoped out. We also advise there will not be any likely significant effect on Atlantic salmon, river lamprey and sea lamprey as features of the River Teith SAC. We refer Forthwind to Marine Scotland Science for advice for commercial marine fish species.

[32] www.ipieca.org/publication/alien-invasive-species-and-oil-and-gas-industry
[33] https://www.nature.scot/professional-advice/planning-and-development/natural-heritage-advice-planners-and-developers/planning-and-development-coastal-change
[34] http://www.dynamiccoast.com

We note with respect to cable burial and electromagnetic field impacts that a maximum of two cables will be installed in a single trench to a target burial depth of 1m. UK Government recommends that cables are buried to at least 1.5 m, depending on the suitability of the substrates (Department of Energy and Climate Change (DECC), 2011[35]. We therefore advise that the target burial depth should be 1.5 m deep, where possible, especially in shallow waters (defined as below 20m by Gill and Bartlett 2010). Whilst cable burial would not be expected to reduce the extent of the emission field, it would increase the distance between the cable and the water column.

[35] https://webarchive.nationalarchives.gov.uk/ and http://www.berr.gov.uk/files/file43527.pdf

From: [Redacted]
To: MS Marine Renewables
Cc: [Redacted]
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021
Date: 17 November 2021 16:58:00
Attachments: image001.png

[Redacted]

Thanks for the opportunity to clarify our previous advice.

We have considered each of the points you raised and provide answers below. In doing this we discussed the ornithology questions with colleagues in Marine Scotland Science.

We acknowledge that some of these clarifications amount to significantly different advice from that in our formal response letter. Please get back in touch if that raises issues for Marine Scotland.

All the best

[Redacted]

Ornithology Q 1

We agree regarding the need for clarification on mitigation and environmental monitoring. We also agree the use of acronyms and naming conventions can be confusing. We would suggest the following is provided as part of the EIA report:

A glossary of acronyms and terms used.

Schedule of Mitigation - outlining what aspects of the project are considered to be designed in mitigation and / or separate aspects of mitigation to be implemented as part of any consent

PEMP - Project Environmental Monitoring Plan - detailing what aspects will be monitored during pre construction, construction , operations and maintenance activities as well as decommissioning if the project is consented.

Ornithology Q 2

The current proposal is the latest in a series of varying proposals at this location, and is supported by various bird survey datasets collected over several years and using a variety of methods.

As such it is difficult to discern a clear picture of bird usage at this location, and we have doubts that the patchwork of data gathered to date is robust or demonstrates good practice for the current proposal.

We advise Marine Scotland that all existing bird survey data should be collated and presented clearly by the applicants. This must include dates of collection (and so age of data), methodology used, and target species. It should include discussion of possible sources of bias - arising through survey methods, and other factors such as presence/ absence of oil rigs and/ or cruise liners during surveys.

Due to these questions over the validity of existing survey data - we require the collection of a further season of wintering bird survey data. Survey methods should be discussed and agreed with NatureScot and Marine Scotland Science; should be designed to target the species of most concern (including scoters, divers); and as we are partway through the current winter season will have to be collected during the winter 2022-23 season.

Ornithology Q 3

We confirm that we support the list of SPAs as presented on page 82 of the Scoping Report, we do not support the subsequent analysis and conclusions laid out in Table 17.

We maintain the advice provided in Appendix B of our Scoping response letter which lays out the species from these SPAs which must be assessed in the context of collision risk (Table 1) and/ or displacement/ barrier effects (Table 2).

Ornithology Q 4

This is an error, we confirm that the assessment should only include PVA outputs for a 25 year time period.

Ornithology Q 5

This is also an error, however we do provide further advice on cumulative and in-combination impacts in the following section.

Ornithology Q 6

Cumulative assessment of effects should be considered separately for construction and operation phases.

For the construction phase we recommend the following project that we are aware of needs to be considered is the Forth Road Bridge 5-year maintenance Marine Licence (ornithology only).

For operational phase we advise the following:

Development	**Scoped in/ out**	**Comments**
European Offshore Wind Deployment Centre	In	Marine mammals only
Hywind Scotland Pilot Park	Out	
Inch Cape Offshore Windfarm	In	
Kincardine Offshore Windfarm	Out	
Levenmouth Demonstration Turbine (ornithology only)	In	Confirm ornithology only
Moray East Offshore Windfarm (marine mammals only).	In	Confirm marine mammals only
Moray West Offshore Windfarm (marine mammals only).	In	Confirm marine mammals only
Neart na Gaoithe Offshore Windfarm	In	
Seagreen Alpha Offshore Windfarm	In	
Seagreen Bravo Offshore Windfarm	In	

Marine Mammals Q 1

We reiterate that Arso Civil et al (2021) contains the most up-to-date population estimate for bottlenose dolphin and should be used in forthcoming assessments. This was recently discussed and agreed with Marine Scotland Science colleagues.

Further Advice Q 1

For clarity we advise that INNS should be considered through a Biosecurity Plan which would apply biosecurity principles throughout the lifespan of the project, and we do not require ongoing regular monitoring for INNS. We support Marine Scotland's intent to secure this Plan at application stage.

Further Advice Q 2

We confirm that we are content that these issues are scoped out of the current proposal, having been fully assessed in previous proposals.

Further Advice Q 3

If cable landfall works are included in the current application, then that landfall must be designed in alignment with outputs from the Dynamic Coast project (ie considering the impacts of coastal climate change) and should be scoped into assessment.

--

[Redacted] I[Redacted]
NatureScot | Silvan House, 3rd Floor East, 231 Corstorphine Road, Edinburgh, EH12 7AT | [Redacted]
nature.scot | @nature_scot | *Scotland's Nature Agency* | *Buidheann Nàdair na h-Alba*

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 08 November 2021 17:56
To: [Redacted] @nature.scot>
Cc: [Redacted] @gov.scot; MS.MarineRenewables@gov.scot
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Dear [Redacted]

Thank you for the provision of this representation on the scoping report. To assist in the Scottish Ministers adopting a scoping opinion I wondered if you could clarify a few points in NarureScot's advice please.

In relation to Birds, these are:

1. You make mention of the need for draft PEMP to be submitted at the time of the application. MS-LOT fully endorses any provision of draft documentation up front rather than relying on suspensive conditions. However, your advice suggests that the PEMP considers mitigation measures and monitoring work. For the avoidance of doubt, and indeed the number of acronyms is confusing, the PEMP is a Project Environmental Monitoring Plan, and we wouldn't expect to see mitigation included. Mitigation would perhaps be better documented in a Schedule of Mitigation or an Environmental Management Plan. Could you advise if this is what you meant?
2. You note that some datasets "may reach the end of their lifespan soon and may require updating with new surveys". It is not clear which datasets you have in mind here (though it may be that this may include the ornithology baseline data, where boat based surveys were completed in February 2017). Could you please clarify this point so that, if needed, the opinion can advise on the need for new surveys where deemed appropriate.
3. You state that NS 'agree with the list of SPAs to be considered' (citing page 82 of the Scoping Report), however the scoping report goes on to scope out some of those sites being considered. Resulting in the scoping report not scoping in all of the sites mentioned in Page 82. Table 17 provide the detail of which sites are being scoped in or out from the long list provided on page 82. Please could you clarify if you are endorsing the conclusions presented by the developer in Table 17?
4. NS advises that PVA modelling is undertaken for two time periods (25 years and 50 years). Given that the proposed operational period be 25 years (table 1) it may be sufficient to only include PVA outputs for a 25 year time period. Can you please give a little more detail as to why NS considered the need for a 50 year period to also be assessed via PVA?
5. You advise that PVA modelling should be completed both for impacts from the project alone and in combination with other Forth & Tay developments, (in brackets it says 'see below'), however there does not appear to be any further relevant text on this beyond this point of the document. Can you advise if this is intended of if perhaps some text has been omitted from your response?
6. You advise that other projects and plans to be considered in the cumulative and in-combination assessment should be agreed in consultation with Marine Scotland and other Regulators. The scoping report states the projects to be included in section 11.7 which reads:

   11.7. Cumulative Assessment of Effects

   Advice is sought from NatureScot/MSS on the proposed projects (listed below) considered for the cumulative assessment:

   - *European Offshore Wind Deployment Centre.*
   - *Hywind Scotland Pilot Park.*
   - *Inch Cape Offshore Farm.*
   - *Kincardine Offshore Windfarm.*
   - *Levenmouth Demonstration Turbine (ornithology only).*
   - *Moray East Offshore Windfarm (marine mammals only).*
   - *Moray West Offshore Windfarm (marine mammals only).*
   - *Neart na Gaoithe Offshore Windfarm.*
   - *Seagreen Alpha Offshore Windfarm; and*
   - *Seagreen Bravo Offshore Windfarm.*

   As advice has been sought at this scoping stage, please can NS confirm if, in its view, this list is suitable?

In relation to Marine Mammals the questions are:

1. I note that you recommend using the 'population estimate presented in Arso Civil *et al* (2021)' . I am advised that this may not be correct and may be an oversight.

In relation to further advice:

1. In relation to INNS, NS has stated that 'consideration of this and other species should therefore be given through a biosecurity plan (detailing best-practice steps to be taken to manage these risks and to minimise the transfer and spread of marine invasive non-native species and that this should form part of the project PEMP and should include the Check Clean Dry principles). As stated above the 'M' in pemp is about monitoring. Are you advising that a monitoring plan is needed? You point here seems to refer to 'consideration' (do you mean scoping INNS in to the EIA?) and a biosecurity plan (which could involve monitoring, but would also include management and therefore go beyond what a PEMP would require) .
   For clarity, whilst the Scoping Report states that a biosecurity plan will be produced after consent is issued. MS-LOT intends to seek a draft biosecurity plan (maybe as part of the Environmental Management Plan) at application stage rather than by

suspensive condition.

2. You also state that you note in the scoping report that 'potential impacts on hydrodynamic processes and coastal geomorphology will be considered as part of the Physical Processes and Water Quality assessment'. However, the Scoping Report goes on to scope such matters out of further assessment. Can you clarify if NS is in agreement with this? (it appears from your advice that this may not be the case).
3. You also note a need to consider coastal change impacts due to climate change. The applicant has scoped these out – can you please clarify your position here?

Thanks again for the representation and in advance of your consideration of the above. Please could I have clarification on the above points by 17th Nov?

I would be happy to discuss any of the above it is helpful.

Kind regards

[Redacted]

From: [Redacted] @nature.scot>
Sent: 11 October 2021 16:42
To: [Redacted] @gov.scot>; MS Marine Renewables <MS.MarineRenewables@gov.scot>
Cc: [Redacted] @gov.scot>
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Thank you for consulting us on the above Scoping Request – our response is attached to this email.

[Redacted]

NatureScot | Silvan House, 3rd Floor East, 231 Corstorphine Road, Edinburgh, EH12 7AT | [Redacted]
nature.scot | @nature_scot | *Scotland's Nature Agency* | *Buidheann Nàdair na h-Alba*

From: [Redacted] @gov.scot>
Sent: 08 October 2021 12:41
To: [Redacted] @nature.scot>; MS.MarineRenewables@gov.scot
Cc: [Redacted] @gov.scot
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

[Redacted]

Thank you for the update MS-LOT will expect Nature Scots response on Monday.

Kind regards

[Redacted]

From: [Redacted] @nature.scot>
Sent: 08 October 2021 12:31
To: [Redacted] @gov.scot>; MS Marine Renewables <MS.MarineRenewables@gov.scot>
Cc: [Redacted] @gov.scot>
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Hello –

I'm really sorry but we're not able to complete our scoping response today. We anticipate being able to get it to you on Monday (11 October) however.

I hope this doesn't present any major problems.

All the best.

--

[Redacted]

NatureScot | Silvan House, 3rd Floor East, 231 Corstorphine Road, Edinburgh, EH12 7AT | [Redacted]
nature.scot | @nature_scot | *Scotland's Nature Agency* | *Buidheann Nàdair na h-Alba*

From: [Redacted] @gov.scot>
Sent: 21 September 2021 15:01
To: [Redacted] @nature.scot>; MS.MarineRenewables@gov.scot
Cc: [Redacted] @gov.scot
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

[Redacted]

MS-LOT is content to grant this extension until 08 October 2021.

Kind regards,

[Redacted]

From: [Redacted] @nature.scot>
Sent: 21 September 2021 10:03
To: MS Marine Renewables <MS.MarineRenewables@gov.scot>
Cc: [Redacted] @gov.scot>; [Redacted] @gov.scot>
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Hello –

Can I request an extension to the consultation deadline for this scoping consultation? If we could have an extra 2 weeks that would be ideal.

All the best.

--

[Redacted]

NatureScot | Silvan House, 3rd Floor East, 231 Corstorphine Road, Edinburgh, EH12 7AT | [Redacted]
nature.scot | @nature_scot | *Scotland's Nature Agency* | *Buidheann Nàdair na h-Alba*

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 25 August 2021 16:27
Cc: [Redacted] @gov.scot; [Redacted] @gov.scot
Subject: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Dear Sir/Madam,

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 ("the MW EIA Regulations")
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 2017 ("the EW EIA Regulations")

Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil

In respect of the proposed marine licence and section 36 applications for the above works under the Marine (Scotland) Act 2010 and the Electricity Act 1989, Forthwind has requested the Scottish Ministers adopt a scoping opinion in relation to the above proposed works under Regulation 14(1) of the MW EIA Regulations and Regulation 12(1) of the EW EIA Regulations.

The scoping report submitted by the applicant can be found at: https://marine.gov.scot/node/21519

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 their proposed marine licence applications, 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.

The scoping request includes a description of onshore infrastructure and indicates that the previously granted deemed planning permission will be used in respect of the proposed development. Please be advised that there is a likelihood that a new deemed planning will be required. MS-LOT would therefore be grateful if consultees could confirm, if applicable, whether they are content that the onshore aspects are scoped out of proposed EIA report based on the information given in the scoping request should a new deemed planning be required.

Previous application and EIA documentation submitted in 2016 pertaining to the existing s.36 consent and marine licences referred to within the scoping request is available to download here.

Please submit your response electronically to ms.marinerenewables@gov.scot by 24 September 2021. 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.

Yours faithfully,

[Redacted]

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

Covid-19: Marine Scotland - Licensing Operations Team (MS-LOT) is working from home and, as a result, determination of applications may take longer than our stated timelines. In addition, MS-LOT is unable to respond to phone enquiries. Please therefore communicate with MS-LOT via email. Email addresses are MS.MarineRenewables@gov.scot for marine renewables correspondence or MS.MarineLicensing@gov.scot for all licensing queries.

If you are not the intended recipient please destroy the email, remove any copies from your system and inform the sender immediately by return.
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If you are not the intended recipient please destroy the email, remove any copies from your system and inform the sender immediately by return.
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****

Northern Lighthouse Board

84 George Street
Edinburgh EH2 3DA

Tel: [Redacted]
Fax: [Redacted]

Website: www.nlb.org.uk
Email: enquiries@nlb.org.uk

Your Ref: Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation
Our Ref: [Redacted]

[Redacted]
[Redacted]
Marine Scotland – Marine Planning and Policy
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

26 August 2021

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 ("the MW EIA Regulations")

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 2017 ("the EW EIA Regulations")

Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation

Thank you for your e-mail correspondence dated 25th August 2020 relating to the Scoping Report submitted by **Forthwind Limited** in relation to the proposed Forthwind Offshore Wind Demonstration Project, approximately 1.5km from the coast at Methil, Fife.

Northern Lighthouse Board note that this latest proposal is for the installation and operation of a single Wind Turbine Generator (WTG), with a nominal capacity of 20MW, alongside a temporary Meteorological Mast.

Northern Lighthouse Board are satisfied with the content of the Scoping Report, and note the proposal by the applicant to engage in consultation with NLB with regard to the navigational lighting and marking of the WTG and Met Mast.

NLB would like to indicate that MGN 543, referenced within Section 7 of the report is no longer valid, and has been superseded by MGN 654.

Yours sincerely
[Redacted]

T: +44 (0)131 244 2500
E: MSS_Advice@gov.scot

[Redacted]

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

10 November 2021

FORTHWIND OFFSHORE WIND DEMONSTRATION PROJECT - SCOPING REQUEST - RSPB COMMENTS AND FURTHER QUERIES

Marine Scotland Science (MSS) have reviewed the relevant documentation and have provided the following comments.

Marine Ornithology

With respect to the specific query on which receptors should be scoped in for the subsequent EIA, we reiterate our previous advice (dated 29 October 2021) that Ornithology should be scoped in; this is in agreement with scoping responses from NatureScot (NS) and RSPB.

MSS previously provided our advice on the Scoping Report and associated consultation response from NatureScot; here we supplement this advice following receipt of the RSPB consultation response.

MS-LOT have noted that some of the data which Forthwind plan to use is relatively old and sought MSS advice on our view on whether the data proposed to be utilised in the assessment is out of date and where new data should be collected.

The key baseline survey data for ornithology (boat based at-sea survey data) were collected March 2015 to February 2017. NatureScot advise that some of the datasets used in previous assessments may reach the end of their lifespan soon and may require updating with new surveys. RSPB also highlight the age of the data (4-5 years old) as a potential issue, increasing uncertainty, requiring full and detailed justification to demonstrate that data is adequate and suitably robust. In our previous advice, MSS suggest that we would welcome further discussion on this issue, but it is not currently clear where the cut off should be for data inclusion. For the ornithology a key issue to consider is not just the age of the data but also how these data are used, e.g. given the differences between the original survey area (larger) and that of the proposed development (see our previous advice for further discussion on this).

The RSPB consultation response largely brought up similar points to those raised by the NS consultation response and our own advice following that. Key points/ additional points to consider from the RSPB advice are:

- RSPB advice that a Habitats Regulation Appraisal (HRA) will be required and note key SPAs; this is in agreement with the previous response of NS and MSS. They have also noted (in common with the previous MSS advice) that it is unclear whether Forth Islands SPA is to be scoped in or out and stated that they believe it should be scoped in.
- RSPB raise concerns around the age of the ornithology baseline survey data and state that full and detailed justification will be required in the assessment to demonstrate that the

underlying survey data is adequate and suitably robust for the purposes of defining the potential impacts (see also our general comment on this aspect above). They also state that expression of uncertainty in assessment outputs is necessary, which given the context MSS interpret to mean including variation and uncertainty when analysing the survey data, which we support.

- In Table 21 of the Scoping Report the Developer proposes an approach for assessing effects magnitude. RSPB state that they do not support this approach (guide thresholds for percentage of population affected). NatureScot did not directly comment on this table in their advice, however they did provide advice on assessing population level effects in a HRA context (under *Population consequences* in Appendix B of their consultation response). The approach outlined by NS is supported by MSS.
- In common with the consultation response from NS and MSS's earlier advice, RSPB advice that cumulative impacts will need to be assessed.
- RSPB noted that some of the figures within the main body of the text (examples given being figures 2, 8 and 9) were not clearly legible when viewed electronically and/or lacked contextual info requesting this be amended for future submissions. MSS support this request.

Hopefully these comments are helpful to you. If you wish to discuss any matters further then please contact the REEA Advice inbox at MSS_Advice@gov.scot

Yours sincerely,

Renewable Energy Environmental Advice group
Marine Scotland Science

giving nature a home
Scotland

[Redacted]

Marine Scotland – Licensing Operations Team
Scottish Government

Emailed: MS.MarineRenewables@gov.scot

24 September 2021

Dear [Redacted]

Application: Scoping Opinion for Offshore Windfarm pursuant to Regulation 14(1) of the Marine Works EIA Regulations 2017 and Regulation 12(1) of the Electricity Works EIA Regulations 2017
Location: Forthwind Offshore Wind Demonstration Project, Methil

Thank you for consulting RSPB Scotland on the above application submitted by Forthwind Ltd. We understand a similar report was initially submitted in 2019 with the resultant Marine Scotland scoping opinion being published in November 2019. As a consent application had not however been submitted within twelve months a new scoping opinion is now required. Furthermore, the proposed development is to consist of one three bladed wind turbines with a maximum hub height of 156 meters above HAT[1] capable of producing 20 MW and a temporary meteorological mast (estimated to be 160 meters above HAT). In comparison, the previously scoped development consisted of two, two blades wind turbines with a maximum hub height of 121 meters above LAT and together capable of producing 18 MW. The duration from commissioning is also proposed to be 25 rather than 20 years.

We welcome the innovation and demonstration potential offered by projects such as this, particularly given the opportunities it may offer to increase our renewable energy capacity and help meet our climate emissions targets. We are though in a joint climate and nature crisis and the effect of the proposed development on nature must not be overlooked. The demonstration project has identified potential for lighter, stronger, and larger blades, and longer rotor length. This will likely change the swept area and so may influence collision risk. We encourage the developer to include monitoring the effect of these different blades and rotor length on collision risk as part of the demonstration project's remit.

We wish to make the following key points which we hope can be considered and included in the forthcoming environmental assessment:

- The proposal is located within and adjacent to internationally designated Special Protection

[1] We note that *"Table 1 – Design Envelope - Consented compared to New Proposed Parameters"* suggests the max hub height above LAT is 156 meters. At all other points in the document, hub height is in relation to HAT. We therefore assume this is a typographical error. Clarification on the maximum hub height of the proposed development should however be provided.

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BirdLife INTERNATIONAL
The RSPB is part of BirdLife International, a partnership of conservation organisations working to give nature a home around the world.

Areas (Outer Firth of Forth and St Andrews Bay Complex, Firth of Forth, Forth Islands) and, as identified in Table 2, in addition to the EIA, will require a habitats regulations appraisal. It is not clear from Table 17 whether the Forth Islands SPA has been scoped in or out of the EIA. For the avoidance of doubt, we believe it should be included.

- The scoping Report suggests that baseline survey data from March 2015 to February 2017 will be used to inform assessment. This survey data is now over four years, and approaching 5 years, old. The older the data supporting the environmental assessment the more uncertainty there is in the conclusions. Full and detailed justification will be required in the assessment to demonstrate that the underlying survey data is adequate and suitably robust for the purposes of defining the potential impacts. Additionally, expression of uncertainty in assessment outputs is necessary.
- Collision risk modelling will require appropriate survey data. This is important when considering the suitability of using data collected from different survey methods (i.e., on and offshore surveys).
- In Table 21 – we do not support the percentages presented in the guides to assessing magnitude of effect. Magnitude of effect is dependent on the species and population being assessed, using a generic percentage value of impact will not account for the specifics of the species and population being assessed. The guide therefore could be very misleading and misrepresent significance.
- Cumulative impacts of this proposal with other offshore development will be required. The large commercial scale offshore wind farm projects in the Firths of Forth and Tay region will be particularly relevant with seabird population scale impacts needing to be a focus in the assessment.
- We note that initial consultation with stakeholders including RSPB Scotland is proposed prior to the submission of the application and prior to undertaking any assessments. Further pre-application discussion in conjunction with Nature Scot and Marine Scotland to ensure the use of an appropriate methodologies will be mutually beneficial and is welcomed.

Our previous submissions to related applications and variations remain pertinent to the Development and should be taken into account.

Finally, some of the figures within the main body of the text (for example figures 2, 8 and 9) were not clearly legible when viewed electronically and in the case of figures 2 and 9 did not including meaningful contextual information to aid with location. It would be most helpful if this could be amended for future submissions.

We hope these comments are of use and should you wish to discuss of any of the above please do not hesitate to contact me.

Yours sincerely,

[Redacted]

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 September 2021

[Redacted]

Marine Scotland – Marine Planning and Policy
Scottish Government
Marine Laboratory,
375 Victoria Road,
Aberdeen,
AB11 9DB
ms.marinerenewables@gov.scot

Dear [Redacted]

MS/21/121 - Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation

I have read the relevant parts of the scoping report and our 2019 response. That response is still relevant. I agree that recreation and tourism can be scoped out as the navigational safety aspects are included within shipping and navigation, note that the NRA will be updated in consultation with stakeholders such as ourselves and confirm that we will be happy to assist in this way.

Yours sincerely,

[Redacted]

Royal Yachting Association Scotland

sport scotland
LOTTERY FUNDED

Note for the Record

Forthwind Scoping Report – Forthwind and the Scottish Fishermen's Federation

Venue: Conference Room, Forthwind Offices,

Date: Thursday 09 February, 10.00.

Attendees:

Scottish Fishermen's Federation: [Redacted]

Forthwind: [Redacted]

Update on the Forthwind Proposals and Scoping Request

- [redacted] provided a brief update on the 2B Energy technology and progress with the Forthwind development. The two-turbine application was consented on the 21 December 2016 and the project was currently engaging with several companies to reach financial close of the project. The onshore demonstrator turbine at Eemshaven in the North of the Netherlands was performing well and work was well advanced in the design of the two turbines. It was anticipated that Geotechnical investigations at the 2-turbine site will be carried out soon and the installation was due commence in Q2 of 2018. A scoping report for the next phase (9 turbine array – i.e. the 2 turbines plus another 7) was submitted to Marine Scotland and was published for consultation in December 2016.
- [redacted] stated that the fishermen were unhappy with the level of engagement to date and disputed some of the statements made in the scoping report relating to engagement with the fishing community (there was disagreement between the fishermen and Forthwind as to whether the wider project array was raised during previous discussions).
- [redacted] highlighted that he met with [redacted] (the chair of the North and East Coast Inshore Fisheries Group) in October, prior to the scoping report being submitted in November. [redacted] affirmed that the scoping report was just the initial step in the process, with the intention to provide stakeholders with information on the proposal and was essentially the first stage of consultation. At this stage, no application has been made for the wider Forthwind development, just a scoping report requesting views from stakeholders about the development and proposals to assess the potential impacts on existing interests/assets/ environment.
- [redacted] and [redacted] acknowledged that they confronted [redacted] about the October meeting in February when they became aware of the scoping application. They said that [redacted] hadn't informed the local fishermen about the meeting or the scoping report submission to Marine Scotland.
- [redacted] said that they gave in to Marine Scotland pressure on the original Forthwind two turbine application as (a) he felt that the local fishing community, whilst not happy about the development, could to a certain extent work around the development and (b) he saw some opportunities for the fishermen to work with 2B Energy on research on the interaction between wind turbines and local fishing stock. He asserted that if he was aware of the wider plans, he would have opposed the application.
- [redacted] and [redacted] explained that the main fishing interests in the area were focussed on nephrops interests (lobster, prawn and crab). This was undertaken either by trawling or creels nearer to shore. They highlighted that fishing is of strategic importance to the Scottish economy and contributed to Scotland's largest export industry (food and drink).
- [redacted] and [redacted] questioned the reasoning for the size of the development, the spacing between the turbines and why pick this area. The Fishermen were content with the presence of the 3 nearshore turbines but questioned the need to extend into deeper waters offshore.

- [redacted] and [redacted] explained the reasoning for the development location and configuration (which was provided in the scoping request); specifically:
    - The coastline between the southern end of Kirkcaldy to the north of Levenmouth (including Energy Park) was identified by Fife Council as an area appropriate for the development for offshore wind demonstration project – specifically locating demonstrator sites in Fife would help to promote the offshore wind industry in the area
    - A minimum of 8 rotor lengths is required between each wind turbine to maintain the appropriate clearance for wind turbulence and commercial energy productions within the array. [redacted] highlighted that the difference between the onshore and offshore spacing of wind turbines is to do with the rotor blade length. On shore wind turbines are typically between 2 to 3 MW with a rotor length of around 120m; whereas the 2B Energy turbines are rated at 6MW, with a rotor length of up to 160m. If the turbines are located too close together this causes issues in relation to turbulence and creating eddy wakes, which causes structural and commercial energy production issues for the turbine in the shadow.
    - A maximum length between each turbine to the central turbine is 2km. The integrated transformer on the central turbine is one of the key technology development that 2B Energy want to achieve with the Forthwind Demonstration project.
    - The turbine spacing and the max cable length dictated the maximum extent of spacing between the turbines and lead to the array layout presented in the scoping report.
    - In addition, the site is also constrained by local anchorages (at which there are currently three oil rigs anchored) and marine traffic routes. Forthwind had agreed not to encroach on the eastern area of the study area to maintain service access to the rigs and to Methil Port.
    - [redacted] stated that Forthwind had managed to negotiate access to the Kirkcaldy 1 (K1) anchorage with Forth Ports and extended the array into the Foul Area marked on the Admiralty Charts in the belief that this marked an area where trawling activity should be avoided and therefore not of high fishing interest. The fishermen were unaware of the Foul area marked on the Admiralty Chart.
    - In response to a question by [redacted] as to why couldn't the turbines just go in a line along the coast, [redacted] highlighted that the 'PowerBlock' electrical concept (9 turbines connected in a 'star' grid to the central wind turbine) is critical to the demonstration purpose of the proposed project, ruling out placing the turbines in a line nearshore parallel to the coast.
    - [redacted] also highlighted other stakeholder constraints including local visual concerns, ornithology concerns from SNH to nearshore bird populations, shipping and navigation constraints from Forth Ports, etc. Although an important aspect the development needs to consider not only the fishing concerns but also the concerns of other stakeholders to attempt to achieve a layout that maximises the opportunity and minimised the impact across a range of consideration. Ultimately it is up to Marine Scotland (as the licencing authority) to make a recommendation to the Scottish Energy Minister who will decide as to whether the development should proceed based on the considerations on what achieves the maximum benefit to the local community and national priorities and considerations.
- The fishermen acknowledged the presence of the O&G drill rigs and highlighted that they were unhappy with how the rigs appeared to be there indefinitely and without consultation. Their presence interfered with a straight trawl and prevented trawl fishing taking place not only in the exclusion area where the rig is present but to quite a significant extent beyond the rig.
- [redacted] stated that an easy solution for Forthwind was to pay the fishermen to stay out of the development area.

- [redacted] stated that the actual construction and installation programme was relatively short and asked if it was possible to avoid certain times to minimise impact on fishing activity and whether it was possible to trawl between the turbines considering the were at least 2kim apart and Forthwind weren't currently seeking an exclusion area around the turbines once the they were operational (apart from the statutory 50m safety exclusion area).
- [redacted] explained that he had previously trawled around two rigs in a figure of 8 pattern when they were lit up at night. It was particularly fruitful for some reason and he suspected that the lights from the rig attracted the prawns.

Next Steps

- It was agreed that Forthwind, as per the Marine licence condition, would appoint a Fishing Liaison Officer (FLO) to represent the company in the engagement with the local fishing interests. [redacted] recommended Brown and May as an appropriate company to undertake this role as they already represent some of the other offshore wind farms such as NNG. (***Post meeting note*** – *due to the internal 2B Energy requirement to competitively tender contracts, the project team cannot guarantee that Brown and May will provide the FLO services; however, they will insure that they are invited to tender for the service)*
- It was agreed that [Redacted] will represent the north side of the fishing community as the Fishing Industry Representative (FIR). A representative for the south side of the Firth had not been identified and [redacted] confirmed that he could not represent that fishing community. An action was placed on Forthwind to contact [redacted] to identify who was the new chair of the Port Seton and Cockenzie Fishermen's Association to help identify an appropriate individual to act as the FIR for the south side.
- The Fishermen felt that these appointments (the FLO and FIR's) would give 2B Energy a better understanding of the fishing industry in the area and help inform the discussions on layout, turbine spacing and cable burial and to look at any research that needs to be done.
- It was also felt by the fishermen that the appointments would help to developing a proper dataset and baseline for fishing activity in the area to properly inform the ongoing discussion
- It was agreement that Scottish Fishermen's Federation (SFF) and the Fife Fishermen's Association (FFA) will need to maintain regular contact with 2B Energy as other avenues don't seem to be working.
- Both [redacted] and [redacted] commented that the meeting was helpful to allow Forthwind to have a greater understanding of the potential impact of the development and that going forward we are happy to gain (via the FLO engagement) a clarity on the type, size and number of vessels impacted by the project.

Friday, 27 August 2021

MS Marine Renewables
Scottish Government, Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Development Operations
The Bridge
Buchanan Gate Business Park
Cumbernauld Road
Stepps
Glasgow
G33 6FB

Development Operations
Freephone Number - 0800 3890379
E-Mail - DevelopmentOperations@scottishwater.co.uk
www.scottishwater.co.uk
Follow Us

Dear Customer,

FORTHWIND OFFSHORE WIND, Off Buckhaven, KY8 1AQ
Our Ref: DSCAS-0047371-KCJ
Proposal: FORTHWIND OFFSHORE WIND DEMONSTRATION PROJECT

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 and would advise the following:

Water Capacity Assessment

Scottish Water has carried out a Capacity review and we can confirm the following:

- There is currently sufficient capacity in GLENFARG Water Treatment Works to service your development. However, please note that further investigations may be required to be carried out once a formal application has been submitted to us.
- Please note the nearest water infrastructure is approx. 450m from the site boundary.

Waste Water Capacity Assessment

- Unfortunately, according to our records there is no public Scottish Water, Waste Water infrastructure within the vicinity of this proposed development therefore we would advise applicant to investigate private treatment options.

Please Note

- The applicant should be aware that we are unable to reserve capacity at our water and/or waste water treatment works for their proposed development. Once a formal connection application is submitted to Scottish Water after full planning permission has been granted, we will review the availability of capacity at that time and advise the applicant accordingly.

Drinking Water Protected Areas

A review of our records indicates that there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed activity.

Surface Water

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.

There may be limited exceptional circumstances where we would allow such a connection for brownfield sites only, however this will require significant justification from the customer taking account of various factors including legal, physical, and technical challenges.

In order to avoid costs and delays where a surface water discharge to our combined sewer system is anticipated, the developer should contact Scottish Water at the earliest opportunity with strong evidence to support the intended drainage plan prior to making a connection request. We will assess this evidence in a robust manner and provide a decision that reflects the best option from environmental and customer perspectives.

General notes:

- Scottish Water asset plans can be obtained from our appointed asset plan providers:
    - Site Investigation Services (UK) Ltd
    - Tel: 0333 123 1223
    - Email: sw@sisplan.co.uk
    - www.sisplan.co.uk
- Scottish Water's current minimum level of service for water pressure is 1.0 bar or 10m head at the customer's boundary internal outlet. Any property which cannot be adequately serviced from the available pressure may require private pumping arrangements to be installed, subject to compliance with Water Byelaws. If the developer wishes to enquire about Scottish Water's procedure for checking the water pressure in the area, then they should write to the Customer Connections department at the above address.
- If the connection to the public sewer and/or water main requires to be laid through land out-with public ownership, the developer must provide evidence of formal approval from the affected landowner(s) by way of a deed of servitude.

- Scottish Water may only vest new water or waste water infrastructure which is to be laid through land out with public ownership where a Deed of Servitude has been obtained in our favour by the developer.

- The developer should also be aware that Scottish Water requires land title to the area of land where a pumping station and/or SUDS proposed to vest in Scottish Water is constructed.

- Please find information on how to submit application to Scottish Water at our Customer Portal.

Next Steps:

All Proposed Developments

All proposed developments require to submit a Pre-Development Enquiry (PDE) Form to be submitted directly to Scottish Water via our Customer Portal prior to any formal Technical Application being submitted. This will allow us to fully appraise the proposals.

Where it is confirmed through the PDE process that mitigation works are necessary to support a development, the cost of these works is to be met by the developer, which Scottish Water can contribute towards through Reasonable Cost Contribution regulations.

Non Domestic/Commercial Property:

Since the introduction of the Water Services (Scotland) Act 2005 in April 2008 the water industry in Scotland has opened to market competition for non-domestic customers. All Non-domestic Household customers now require a Licensed Provider to act on their behalf for new water and waste water connections. Further details can be obtained at www.scotlandontap.gov.uk

Trade Effluent Discharge from Non Dom Property:

- Certain discharges from non-domestic premises may constitute a trade effluent in terms of the Sewerage (Scotland) Act 1968. Trade effluent arises from activities including; manufacturing, production and engineering; vehicle, plant and equipment washing, waste and leachate management. It covers both large and small premises, including activities such as car washing and launderettes. Activities not covered include hotels, caravan sites or restaurants.
- If you are in any doubt as to whether the discharge from your premises is likely to be trade effluent, please contact us on 0800 778 0778 or email TEQ@scottishwater.co.uk using the subject “Is this Trade Effluent?". Discharges that are deemed to be trade effluent need to apply separately for permission to discharge to the sewerage system. The forms and application guidance notes can be found here.

- Trade effluent must never be discharged into surface water drainage systems as these are solely for draining rainfall run off.
- For food services establishments, Scottish Water recommends a suitably sized grease trap is fitted within the food preparation areas, so the development complies with Standard 3.7 a) of the Building Standards Technical Handbook and for best management and housekeeping practices to be followed which prevent food waste, fat oil and grease from being disposed into sinks and drains.
- The Waste (Scotland) Regulations which require all non-rural food businesses, producing more than 50kg of food waste per week, to segregate that waste for separate collection. The regulations also ban the use of food waste disposal units that dispose of food waste to the public sewer. Further information can be found at www.resourceefficientscotland.com

I trust the above is acceptable however if you require any further information regarding this matter please contact me on [Redacted] or via the e-mail address below or at planningconsultations@scottishwater.co.uk.

Yours sincerely,

[Redacted]
[Redacted]
Tel: [Redacted]
developmentoperations@scottishwater.co.uk

Scottish Water Disclaimer:

"It is important to note that the information on any such plan provided on Scottish Water's infrastructure, is for indicative purposes only and its accuracy cannot be relied upon. When the exact location and the nature of the infrastructure on the plan is a material requirement then you should undertake an appropriate site investigation to confirm its actual position in the ground and to determine if it is suitable for its intended purpose. By using the plan you agree that Scottish Water will not be liable for any loss, damage or costs caused by relying upon it or from carrying out any such site investigation."

Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

[Redacted]
Marine Scotland - Marine Planning & Policy
Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Our ref: 2537
Your ref:

SEPA email contact:
planning.se@sepa.org.uk

By email only to: ms.marinerenewables@gov.scot

23 September 2021

Dear [Redacted]

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ("The MW EIA Regulations")
The Electricity Works (Environmental Impact Assessment (Scotland) Regulations 2017 ("The EW EIA Regulations")
Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil

Thank you for consulting SEPA on the scoping opinion for the above development proposal by your email which we received on 25 August 2021.

The issues set out in the appendix below are those which from experience often arise in marine projects. They will not all be relevant in a specific case. If an issue can be scoped out then, the applicant should provide evidence as to why it has been scoped out within the subsequent Environmental Impact Assessment Report.

Regulatory advice for the applicant

Proposed engineering works within the water environment will require authorisation under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Management of surplus peat or soils may require an exemption under The Waste Management Licensing (Scotland) Regulations 2011. Proposed crushing or screening will require a permit under The Pollution Prevention and Control (Scotland) Regulations 2012. Consider if other environmental licences may be required for any installations or processes.

Details of regulatory requirements and good practice advice for the applicant can be found on the Regulations section of our website. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the local compliance team at: FAD@sepa.org.uk.

Perth Strathearn House
Broxden Business Park,
Lamberkine Drive, Perth, PH1 1RX
tel 01738 627989
www.sepa.org.uk • customer enquiries 03000 99 66 99

If you have queries relating to this letter, please e-mail planning.se@sepa.org.uk.

Yours sincerely

[Redacted]

Planning Service

Disclaimer
This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at this time. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning or similar application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application or similar application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue. For planning applications, if you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found on our website planning pages.

Appendix 1: Detailed scoping requirements

This appendix sets out our scoping information requirements. There may be opportunities to scope out some of the issues below depending on the site. Evidence must be provided in the submission to support why an issue is not relevant for this site in order **to avoid delay and potential objection.**

If there is a delay between scoping and the submission of the application then please refer to our website for our latest information requirements as they are regularly updated; current best practice must be followed.

We would welcome the opportunity to comment on the draft submission. As we can process files of a maximum size of only 25MB the submission must be divided into appropriately named sections of less than 25MB each.

1. Water Framework Directive and River Basin Management Planning

1.1. The Water Framework Directive (2000/60/EC) was implemented in Scotland through the Water Environment and Water Services (Scotland) Act 2003 (WEWS). This legislation requires SEPA to lead and co-ordinate in the Scotland and Solway Tweed river basin districts to protect and improve Scotland's water environment. Further information is available from the River Basin Management Planning section of our website. The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) provide controls over activities affecting the water environment.

1.2. Engineering works in transitional (estuaries) and coastal waters are not regulated by SEPA under CAR. Such works below the Mean High Water Springs mark or in any tidal river up to the tidal influence will require a marine licence from Marine Scotland Licensing Operations Team, designated a Responsible Authority under The Water Environment (Relevant Enactments and Designation of Responsible Authorities and Functions) (Scotland) Order 2011 made under Section 2(8) of WEWS. By this designation Marine Scotland is required to ensure that marine licensing assists in the delivery of River Basin Management Planning objectives. Similarly, planning authorities are designated Responsible Authorities by the Water Environment and Water Services (Designation of Responsible Authorities and Functions) Order 2006. In order to meet the requirements of the Water Framework Directive Responsible Authorities must carry out their statutory functions in a manner that secures compliance with the objectives of the Water Framework Directive (i) preventing deterioration and (ii) promoting improvements in the water environment in order that all water bodies achieve "good" ecological status by 2015.

1.3. River basins comprise all surface waters, including transitional (estuaries) and coastal waters extending to 3 nautical miles seaward from the territorial baseline. Within the River Basin Management context, the ES should identify if the impacts of the proposal are likely to lead to deterioration of the marine environment or present opportunities for improving the marine environment. Marine Scotland and, where applicable, the planning authority, must take this into account in considering the application due to their designation as Responsible Authorities.

1.4. The Water Framework Directive (WFD) requires considerations of Scotland's water bodies in terms of their chemical, biological and hydromorphological parameters and combines these parameters to score each water body in terms of its status, ranging from bad, through poor, moderate, good to high. A system of River Basin Planning has been put in place to ensure delivery of the WFD and manages the current targets set for each water body in support of Directive targets.

1.5. Water body data collated in support of the WFD is available on the Marine Scotland website and should be used in assessing any development proposal. The website provides data on the overall status of all Scotland's water bodies, with the options of filtering by local authority, catchment or water body name or alternatively just panning across the map. A summary table of the 'overall status' and an indication of whether there has been 'change' or 'no change' in status in the last year is provided for each water body in the search results, below the spotfire map. This table can be exported if required. Classification results are updated annually (following any necessary verification requiring to be completed post publication). If you require further information for a water body which has undergone a change in status in the last year you can request verification of the change by emailing the RBMP Unit (rbmp@sepa.org.uk) entitling your email "Urgent request for data verification". Detailed information on the pressures affecting an individual water body and the measures (actions) set against it to address the pressures are available by accessing the individual water body datasheet via the relevant hyperlink. This data should form part of the baseline characterisation in the ES.

1.6. In order to meet the objectives of the Water Framework Directive, coastal development should be designed wherever possible to avoid engineering activities in the marine environment. 2.7

1.7. We recommend that it be demonstrated in the ES that every effort has been made to leave the marine environment in its natural state. There is a need to protect the remaining areas of intertidal zone along some stretches of the developed coastline as these areas have become fragmented and degraded by the coalescence of development in the past. 2.8

1.8. As responsible authorities, planning authorities should promote measures already agreed in respect of relevant water bodies as well as considering other enhancement opportunities to contribute to River Basin Management Plan, Nature Conservation (Scotland) Act 2004 and sustainability development objectives. Examples may include restoration, coastal realignment, soft engineering or the incorporation of naturalistic features in the design of shoreline works, or planting with salt tolerant species. Guidance that may be drawn upon includes:

- Water Framework Directive Mitigation Measures Manual
- Estuary Edges: Ecological Design Guidance

2. Site layout and nature of construction for marine developments

2.1. The ES should contain site plans and cross sections showing the location, footprint, type and design of all the engineering structures, including temporary works, in the marine environment. Information for onshore elements such as access tracks, buildings, temporary works etc. should also be included. Access routes and working compounds for vehicles should be specified during construction. This information will allow us to screen the proposals and determine whether they are likely to present a risk to ecological status.

2.2. For **marine renewables** including **offshore wind, shoreline wave, tidal stream and barrage related developments** the ES should include plans showing the array of the devices, inter-array cabling, subsea cabling routes and landfall, and any associated off/onshore infrastructure (see section 8) within 3 nm of the shoreline. The ES should describe device and cable installation methods and should discuss the likelihood of any significant impacts during construction, operation and decommissioning. The significance of any potential impacts to the coastal zone e.g. sand dune and saltmarsh habitats, should be assessed with mitigation measures applied where appropriate.

Background information to help inform the ES process is available from Marine Scotland and the European Marine Energy Centre (EMEC). The EMEC guidance is designed to assist developers in considering the range and scale of impacts that may result from the testing of devices. Generally, if this standard industry guidance is followed for scoping, preparing and undertaking EIA for marine renewables, then SEPA is likely to be satisfied with the standard of assessment.

3. Marine ecological interests

3.1. Advice on designated sites and European Protected Species should be sought from Scottish Natural Heritage. Marine and transitional Special Areas of Conservation (SAC) and Special Protected Areas (SPA) and Marine Protected Areas (MPA) are also Water Framework Directive Protected Areas. Therefore, their objectives are also River Basin Management Plan objectives which should be taken into account when developing the ES. In such situations, Scottish Natural Heritage may contact SEPA for input on the consultation.

3.2. The Nature Conservation (Scotland) Act 2004 gives all public bodies, including SEPA and planning authorities, a duty to further the conservation of biodiversity. The developer is recommended to consult both the UK Biodiversity Action Plan and Local Biodiversity Action Plan lists for marine and coastal features found within the proposed areas of development, and consider mitigation measures, as appropriate. During the construction, operation and maintenance phases, it is important that good working practice is adopted and that wider habitat damage is mitigated against or kept to a minimum within defined acceptable limits. These should be controlled through a Construction Environmental Management Plan (see section 6 below).

3.3. Given that the accidental introduction of Marine Non-Native Species (MNNS) has been highlighted as a risk for water body degradation, we recommend that controls should be included in development planning and marine licensing for MNNS in line with Water Framework Directive and Marine Strategy Framework Directive objectives, and EU Biodiversity Strategy targets. Under the Water Framework Directive the presence of MNNS within a water body can constitute a significant pressure on the biological elements. Good status is usually the maximum a water body can achieve if MNNS are detected and this can fall to moderate status if MNNS are present above certain thresholds. Once well established, efforts to eliminate MNNS species have proven to be extremely expensive and so far, no non-native species have been successfully eradicated from the marine environment. Therefore, in view of these difficulties, we support the GB Non-Native Species Secretariat recommendation to put into place effective biosecurity measures to prevent introduction and to stop their spread.

Accidental introduction of MNNS can also occur via attachment to construction plant, specialised equipment and moorings as these are moved from one area to another. Please detail the measures to minimise the risks of introducing of MNNS into the adjacent water bodies within the ES and draft Construction Environmental Management Plan. Guidance that may be drawn upon includes:

- The alien invasive species and the oil and gas industry guidance produced by the Oil and Gas industry;
- SNH web-based advice on Marine non-native species;
- Marine non-native guidance from the GreenBlue (recreation advice).

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- Location e.g. grid reference and description of site;
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9.4. The route of roads, tracks or trenches within 100 m of groundwater dependent terrestrial ecosystems (identified in Appendix 2) should be reconsidered. Similarly, the locations of borrow pits or foundations within 250 m of such ecosystems should be reconsidered. If infrastructure cannot be relocated outwith the buffer zones of these ecosystems then the likely impact on them will require further assessment. This assessment should be carried out if these ecosystems occur within or outwith the site boundary so that the full impacts on the proposals are assessed. The results of this assessment and necessary mitigation measures should be included in the ES.

9.5. For areas where avoidance is impossible, details of how impacts upon wetlands including peatlands are minimised and mitigated should be provided within the ES or planning submission. In particular impacts that should be considered include those from drainage, pollution and waste management. This should include preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, dewatering, excavations, drainage channels, cable trenches, or the storage and reuse of excavated peat. Detailed information on waste management is required as detailed below. Any mitigation proposals should also be detailed within the Construction Environmental Management Plan as detailed below.

10. Carbon Balance

10.1. Scottish Planning Policy (SPP) states (Paragraph 205) that "Where peat and other carbon rich soils are present, applicants should assess the likely effects of development on carbon dioxide (CO2) emissions. Where peatland is drained or otherwise disturbed, there is liable to be a release of CO2 to the atmosphere. Developments should aim to minimise this release." The ES or planning submission should include a) a summary demonstrating how the development has been designed with regards to layout and mitigation to minimise release of CO2 and b) preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, drainage channels, cable trenches, or the storage and re-use of excavated peat.

11. Disturbance and re-use of excavated peat

11.1. Where the proposed terrestrial infrastructure will impact upon peatlands, a detailed map of peat depths (this must be to full depth) should be submitted. The peat depth survey should include details of the basic peatland characteristics.

11.2. By adopting an approach of minimising disruption to peatland, the volume of excavated peat can be minimised, reducing CO2 emissions and the commonly experienced difficulties in dealing with surplus peat. The generation of surplus peat is a difficult area which needs to be addressed from the outset given the limited scope for re-use.

11.3. The ES should detail the likely volumes of surplus peat that will be generated, including quantification of catotelmic and acrotelmic peat, and the principles of how the surplus peat will be reused or disposed of.

11.4. There are important waste management implications of measures to deal with surplus peat as set out within our Regulatory Position Statement – Developments on Peat. Landscaping with surplus peat (or soil) may not be of ecological benefit and consequently a waste management exemption may not apply. In addition we consider disposal of significant depth of peat as being land-filled waste, and this again may not be consentable under our regulatory regimes. Experience has shown that peat used as cover can suffer from significant drying and oxidation, and that peat redeposited at depth can lose structure and create a hazard when the stability of the material deteriorates. This creates a risk to people who may enter such areas or through the possibility of peat slide and we are aware that barbed-wire fencing has been erected around some sites in response to such risks.

11.5. It is, therefore, essential that the scope for minimising the extraction of peat is explored and alternative options identified that minimise risk in terms of carbon release, human health and environmental impact. Early discussion of proposals with us is essential, and an overall approach of minimisation of peatland disruption should be adopted. If it is proposed to use some excavated peat within borrow pits or bunding then details of the proposals, including

depth of peat and how the hydrology of the peat will be maintained, should be outlined in the ES.

11.6. Our Energy/Renewable webpage provides links to current best practice guidance on peat survey, excavation and management.

12. Existing groundwater abstractions

12.1. Roads, foundations and other construction works associated with large scale developments can disrupt groundwater flow and impact on groundwater abstractions. To address this risk a list of groundwater abstractions both within and outwith the site boundary, within a radius of i)100 m from roads, tracks and trenches and ii) 250 m from borrow pits and foundations) should be provided.

12.2. If groundwater abstractions are identified within the 100 m radius of roads, tracks and trenches or 250 m radius from borrow pits and foundations, then either the applicant should ensure that the route or location of engineering operations avoid this buffer area or further information and investigations will be required to show that impacts on abstractions are acceptable. Further details can be found in Appendix 2 (which is also applicable to other types of developments) of our Planning guidance on windfarm developments.

13. Borrow Pits

13.1. Scottish Planning Policy (SPP) states (Paragraph 243) that “Borrow pits should only be permitted if there are significant environmental or economic benefits compared to obtaining material from local quarries, they are time-limited; tied to a particular project and appropriate reclamation measures are in place.” The ES or planning submission should provide sufficient information to address this policy statement.

13.2. Additionally, a map of all proposed borrow pits must be submitted along with a site specific plan of each borrow pit detailing the:

a) Location, size, depths and dimensions of each borrow pit;

b) Existing water table and volumes of all dewatering;

c) Proposed drainage and settlement traps, turf and overburden removal and storage areas;

d) Restoration profile, nature and volume of infill materials, and, if wetland features form part of the restoration, management proposals.

13.3. The impact of such facilities (including dust, blasting and impact on water) must be assessed in accordance with Planning Advice Note PAN 50 Controlling the Environmental Effects of Surface Mineral Workings (Paragraph 53). In relation to groundwater, information (Paragraph 52 of PAN 50) only needs to be provided where there is an existing abstraction or GWDTE within 250 m of the borrow pit.

Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

[Redacted]
Marine Scotland - Marine Planning & Policy
Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Our ref: 2537
Your ref:

SEPA email contact:
planning.se@sepa.org.uk

By email only to: ms.marinerenewables@gov.scot

23 September 2021

Dear [Redacted]

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ("The MW EIA Regulations")
The Electricity Works (Environmental Impact Assessment (Scotland) Regulations 2017 ("The EW EIA Regulations")
Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil

Thank you for consulting SEPA on the scoping opinion for the above development proposal by your email which we received on 25 August 2021.

The issues set out in the appendix below are those which from experience often arise in marine projects. They will not all be relevant in a specific case. If an issue can be scoped out then, the applicant should provide evidence as to why it has been scoped out within the subsequent Environmental Impact Assessment Report.

Regulatory advice for the applicant

Proposed engineering works within the water environment will require authorisation under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Management of surplus peat or soils may require an exemption under The Waste Management Licensing (Scotland) Regulations 2011. Proposed crushing or screening will require a permit under The Pollution Prevention and Control (Scotland) Regulations 2012. Consider if other environmental licences may be required for any installations or processes.

Details of regulatory requirements and good practice advice for the applicant can be found on the Regulations section of our website. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the local compliance team at: FAD@sepa.org.uk.

Perth Strathearn House
Broxden Business Park,
Lamberkine Drive, Perth, PH1 1RX
tel 01738 627989
www.sepa.org.uk • customer enquiries 03000 99 66 99

If you have queries relating to this letter, please e-mail planning.se@sepa.org.uk.

Yours sincerely

[Redacted]

Planning Service

Disclaimer
This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at this time. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning or similar application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application or similar application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue. For planning applications, if you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found on our website planning pages.

Appendix 1: Detailed scoping requirements

This appendix sets out our scoping information requirements. There may be opportunities to scope out some of the issues below depending on the site. Evidence must be provided in the submission to support why an issue is not relevant for this site in order **to avoid delay and potential objection.**

If there is a delay between scoping and the submission of the application then please refer to our website for our latest information requirements as they are regularly updated; current best practice must be followed.

We would welcome the opportunity to comment on the draft submission. As we can process files of a maximum size of only 25MB the submission must be divided into appropriately named sections of less than 25MB each.

1. Water Framework Directive and River Basin Management Planning

1.1. The Water Framework Directive (2000/60/EC) was implemented in Scotland through the Water Environment and Water Services (Scotland) Act 2003 (WEWS). This legislation requires SEPA to lead and co-ordinate in the Scotland and Solway Tweed river basin districts to protect and improve Scotland's water environment. Further information is available from the River Basin Management Planning section of our website. The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) provide controls over activities affecting the water environment.

1.2. Engineering works in transitional (estuaries) and coastal waters are not regulated by SEPA under CAR. Such works below the Mean High Water Springs mark or in any tidal river up to the tidal influence will require a marine licence from Marine Scotland Licensing Operations Team, designated a Responsible Authority under The Water Environment (Relevant Enactments and Designation of Responsible Authorities and Functions) (Scotland) Order 2011 made under Section 2(8) of WEWS. By this designation Marine Scotland is required to ensure that marine licensing assists in the delivery of River Basin Management Planning objectives. Similarly, planning authorities are designated Responsible Authorities by the Water Environment and Water Services (Designation of Responsible Authorities and Functions) Order 2006. In order to meet the requirements of the Water Framework Directive Responsible Authorities must carry out their statutory functions in a manner that secures compliance with the objectives of the Water Framework Directive (i) preventing deterioration and (ii) promoting improvements in the water environment in order that all water bodies achieve "good" ecological status by 2015.

1.3. River basins comprise all surface waters, including transitional (estuaries) and coastal waters extending to 3 nautical miles seaward from the territorial baseline. Within the River Basin Management context, the ES should identify if the impacts of the proposal are likely to lead to deterioration of the marine environment or present opportunities for improving the marine environment. Marine Scotland and, where applicable, the planning authority, must take this into account in considering the application due to their designation as Responsible Authorities.

1.4. The Water Framework Directive (WFD) requires considerations of Scotland's water bodies in terms of their chemical, biological and hydromorphological parameters and combines these parameters to score each water body in terms of its status, ranging from bad, through poor, moderate, good to high. A system of River Basin Planning has been put in place to ensure delivery of the WFD and manages the current targets set for each water body in support of Directive targets.

1.5. Water body data collated in support of the WFD is available on the Marine Scotland website and should be used in assessing any development proposal. The website provides data on the overall status of all Scotland's water bodies, with the options of filtering by local authority, catchment or water body name or alternatively just panning across the map. A summary table of the 'overall status' and an indication of whether there has been 'change' or 'no change' in status in the last year is provided for each water body in the search results, below the spotfire map. This table can be exported if required. Classification results are updated annually (following any necessary verification requiring to be completed post publication). If you require further information for a water body which has undergone a change in status in the last year you can request verification of the change by emailing the RBMP Unit (rbmp@sepa.org.uk) entitling your email "Urgent request for data verification". Detailed information on the pressures affecting an individual water body and the measures (actions) set against it to address the pressures are available by accessing the individual water body datasheet via the relevant hyperlink. This data should form part of the baseline characterisation in the ES.

1.6. In order to meet the objectives of the Water Framework Directive, coastal development should be designed wherever possible to avoid engineering activities in the marine environment. 2.7

1.7. We recommend that it be demonstrated in the ES that every effort has been made to leave the marine environment in its natural state. There is a need to protect the remaining areas of intertidal zone along some stretches of the developed coastline as these areas have become fragmented and degraded by the coalescence of development in the past. 2.8

1.8. As responsible authorities, planning authorities should promote measures already agreed in respect of relevant water bodies as well as considering other enhancement opportunities to contribute to River Basin Management Plan, Nature Conservation (Scotland) Act 2004 and sustainability development objectives. Examples may include restoration, coastal realignment, soft engineering or the incorporation of naturalistic features in the design of shoreline works, or planting with salt tolerant species. Guidance that may be drawn upon includes:

- Water Framework Directive Mitigation Measures Manual
- Estuary Edges: Ecological Design Guidance

2. Site layout and nature of construction for marine developments

2.1. The ES should contain site plans and cross sections showing the location, footprint, type and design of all the engineering structures, including temporary works, in the marine environment. Information for onshore elements such as access tracks, buildings, temporary works etc. should also be included. Access routes and working compounds for vehicles should be specified during construction. This information will allow us to screen the proposals and determine whether they are likely to present a risk to ecological status.

2.2. For **marine renewables** including **offshore wind, shoreline wave, tidal stream and barrage related developments** the ES should include plans showing the array of the devices, inter-array cabling, subsea cabling routes and landfall, and any associated off/onshore infrastructure (see section 8) within 3 nm of the shoreline. The ES should describe device and cable installation methods and should discuss the likelihood of any significant impacts during construction, operation and decommissioning. The significance of any potential impacts to the coastal zone e.g. sand dune and saltmarsh habitats, should be assessed with mitigation measures applied where appropriate.

Background information to help inform the ES process is available from Marine Scotland and the European Marine Energy Centre (EMEC). The EMEC guidance is designed to assist developers in considering the range and scale of impacts that may result from the testing of devices. Generally, if this standard industry guidance is followed for scoping, preparing and undertaking EIA for marine renewables, then SEPA is likely to be satisfied with the standard of assessment.

3. Marine ecological interests

3.1. Advice on designated sites and European Protected Species should be sought from Scottish Natural Heritage. Marine and transitional Special Areas of Conservation (SAC) and Special Protected Areas (SPA) and Marine Protected Areas (MPA) are also Water Framework Directive Protected Areas. Therefore, their objectives are also River Basin Management Plan objectives which should be taken into account when developing the ES. In such situations, Scottish Natural Heritage may contact SEPA for input on the consultation.

3.2. The Nature Conservation (Scotland) Act 2004 gives all public bodies, including SEPA and planning authorities, a duty to further the conservation of biodiversity. The developer is recommended to consult both the UK Biodiversity Action Plan and Local Biodiversity Action Plan lists for marine and coastal features found within the proposed areas of development, and consider mitigation measures, as appropriate. During the construction, operation and maintenance phases, it is important that good working practice is adopted and that wider habitat damage is mitigated against or kept to a minimum within defined acceptable limits. These should be controlled through a Construction Environmental Management Plan (see section 6 below).

3.3. Given that the accidental introduction of Marine Non-Native Species (MNNS) has been highlighted as a risk for water body degradation, we recommend that controls should be included in development planning and marine licensing for MNNS in line with Water Framework Directive and Marine Strategy Framework Directive objectives, and EU Biodiversity Strategy targets. Under the Water Framework Directive the presence of MNNS within a water body can constitute a significant pressure on the biological elements. Good status is usually the maximum a water body can achieve if MNNS are detected and this can fall to moderate status if MNNS are present above certain thresholds. Once well established, efforts to eliminate MNNS species have proven to be extremely expensive and so far, no non-native species have been successfully eradicated from the marine environment. Therefore, in view of these difficulties, we support the GB Non-Native Species Secretariat recommendation to put into place effective biosecurity measures to prevent introduction and to stop their spread.

Accidental introduction of MNNS can also occur via attachment to construction plant, specialised equipment and moorings as these are moved from one area to another. Please detail the measures to minimise the risks of introducing of MNNS into the adjacent water bodies within the ES and draft Construction Environmental Management Plan. Guidance that may be drawn upon includes:

- The alien invasive species and the oil and gas industry guidance produced by the Oil and Gas industry;
- SNH web-based advice on Marine non-native species;
- Marine non-native guidance from the GreenBlue (recreation advice).

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9.2. A Phase 1 habitat survey should be carried out for the whole site and the guidance A Functional Wetland Typology for Scotland should be used to help identify all wetland areas. National Vegetation Classification (NVC) should be completed for any wetlands identified. Results of these findings should be submitted, including a map with the entire proposed infrastructure overlain on the vegetation maps to clearly show which areas will be impacted and avoided.

9.3. Groundwater dependent terrestrial ecosystems, which are types of wetland, are specifically protected under the Water Framework Directive. The results of the NVC survey and Appendix 2 (which is also applicable to other types of developments) of our Planning guidance on windfarm developments should be used to identify if wetlands are groundwater dependent terrestrial ecosystems.

9.4. The route of roads, tracks or trenches within 100 m of groundwater dependent terrestrial ecosystems (identified in Appendix 2) should be reconsidered. Similarly, the locations of borrow pits or foundations within 250 m of such ecosystems should be reconsidered. If infrastructure cannot be relocated outwith the buffer zones of these ecosystems then the likely impact on them will require further assessment. This assessment should be carried out if these ecosystems occur within or outwith the site boundary so that the full impacts on the proposals are assessed. The results of this assessment and necessary mitigation measures should be included in the ES.

9.5. For areas where avoidance is impossible, details of how impacts upon wetlands including peatlands are minimised and mitigated should be provided within the ES or planning submission. In particular impacts that should be considered include those from drainage, pollution and waste management. This should include preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, dewatering, excavations, drainage channels, cable trenches, or the storage and reuse of excavated peat. Detailed information on waste management is required as detailed below. Any mitigation proposals should also be detailed within the Construction Environmental Management Plan as detailed below.

10. Carbon Balance

10.1. Scottish Planning Policy (SPP) states (Paragraph 205) that "Where peat and other carbon rich soils are present, applicants should assess the likely effects of development on carbon dioxide (CO2) emissions. Where peatland is drained or otherwise disturbed, there is liable to be a release of CO2 to the atmosphere. Developments should aim to minimise this release." The ES or planning submission should include a) a summary demonstrating how the development has been designed with regards to layout and mitigation to minimise release of CO2 and b) preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, drainage channels, cable trenches, or the storage and re-use of excavated peat.

11. Disturbance and re-use of excavated peat

11.1. Where the proposed terrestrial infrastructure will impact upon peatlands, a detailed map of peat depths (this must be to full depth) should be submitted. The peat depth survey should include details of the basic peatland characteristics.

11.2. By adopting an approach of minimising disruption to peatland, the volume of excavated peat can be minimised, reducing CO2 emissions and the commonly experienced difficulties in dealing with surplus peat. The generation of surplus peat is a difficult area which needs to be addressed from the outset given the limited scope for re-use.

11.3. The ES should detail the likely volumes of surplus peat that will be generated, including quantification of catotelmic and acrotelmic peat, and the principles of how the surplus peat will be reused or disposed of.

11.4. There are important waste management implications of measures to deal with surplus peat as set out within our Regulatory Position Statement – Developments on Peat. Landscaping with surplus peat (or soil) may not be of ecological benefit and consequently a waste management exemption may not apply. In addition we consider disposal of significant depth of peat as being land-filled waste, and this again may not be consentable under our regulatory regimes. Experience has shown that peat used as cover can suffer from significant drying and oxidation, and that peat redeposited at depth can lose structure and create a hazard when the stability of the material deteriorates. This creates a risk to people who may enter such areas or through the possibility of peat slide and we are aware that barbed-wire fencing has been erected around some sites in response to such risks.

11.5. It is, therefore, essential that the scope for minimising the extraction of peat is explored and alternative options identified that minimise risk in terms of carbon release, human health and environmental impact. Early discussion of proposals with us is essential, and an overall approach of minimisation of peatland disruption should be adopted. If it is proposed to use some excavated peat within borrow pits or bunding then details of the proposals, including

depth of peat and how the hydrology of the peat will be maintained, should be outlined in the ES.

11.6. Our Energy/Renewable webpage provides links to current best practice guidance on peat survey, excavation and management.

12. Existing groundwater abstractions

12.1. Roads, foundations and other construction works associated with large scale developments can disrupt groundwater flow and impact on groundwater abstractions. To address this risk a list of groundwater abstractions both within and outwith the site boundary, within a radius of i)100 m from roads, tracks and trenches and ii) 250 m from borrow pits and foundations) should be provided.

12.2. If groundwater abstractions are identified within the 100 m radius of roads, tracks and trenches or 250 m radius from borrow pits and foundations, then either the applicant should ensure that the route or location of engineering operations avoid this buffer area or further information and investigations will be required to show that impacts on abstractions are acceptable. Further details can be found in Appendix 2 (which is also applicable to other types of developments) of our Planning guidance on windfarm developments.

13. Borrow Pits

13.1. Scottish Planning Policy (SPP) states (Paragraph 243) that “Borrow pits should only be permitted if there are significant environmental or economic benefits compared to obtaining material from local quarries, they are time-limited; tied to a particular project and appropriate reclamation measures are in place.” The ES or planning submission should provide sufficient information to address this policy statement.

13.2. Additionally, a map of all proposed borrow pits must be submitted along with a site specific plan of each borrow pit detailing the:

a) Location, size, depths and dimensions of each borrow pit;

b) Existing water table and volumes of all dewatering;

c) Proposed drainage and settlement traps, turf and overburden removal and storage areas;

d) Restoration profile, nature and volume of infill materials, and, if wetland features form part of the restoration, management proposals.

13.3. The impact of such facilities (including dust, blasting and impact on water) must be assessed in accordance with Planning Advice Note PAN 50 Controlling the Environmental Effects of Surface Mineral Workings (Paragraph 53). In relation to groundwater, information (Paragraph 52 of PAN 50) only needs to be provided where there is an existing abstraction or GWDTE within 250 m of the borrow pit.

[Redacted]

From: [Redacted] @sff.co.uk>
Sent: 11 October 2021 17:36
To: [Redacted] MS Marine Renewables
Cc: [Redacted]
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021
Attachments: 170327 NFR - Forthwind and Scottish Fishermens Federation.docx

Follow Up Flag: Follow up
Flag Status: Flagged

[Redacted] heres the story from years ago, rgds [Redacted]

From: [Redacted] @gov.scot>
Sent: 11 October 2021 09:58
To: [Redacted] @sff.co.uk>; MS.MarineRenewables@gov.scot
Cc: [Redacted] @gov.scot
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

[Redacted]
Good morning

Thank you for providing your response to the Forthwind scoping request consultation.

Could you please clarify, for MS-LOT's purposes, what your previous concerns were that you expect to be considered in the EIA Report?

Kind regards,
[Redacted]

Marine Scotland - Marine Planning & Policy

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

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Frequently Asked Questions

From: [Redacted] @sff.co.uk>
Sent: 08 October 2021 16:57
To: MS Marine Renewables <MS.MarineRenewables@gov.scot>
Cc: [Redacted] @gov.scot>; [Redacted] @gov.scot>
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Apologies for the delay, our response is simply that the developer is well aware of our previous concerns, so as long as these are considered, we have nothing to add, rgds [Redacted]

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 25 August 2021 16:27
Cc: [Redacted] @gov.scot; [Redacted] @gov.scot
Subject: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Dear Sir/Madam,

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 ("the MW EIA Regulations")
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 2017 ("the EW EIA Regulations")

Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil

In respect of the proposed marine licence and section 36 applications for the above works under the Marine (Scotland) Act 2010 and the Electricity Act 1989, Forthwind has requested the Scottish Ministers adopt a scoping opinion in relation to the above proposed works under Regulation 14(1) of the MW EIA Regulations and Regulation 12(1) of the EW EIA Regulations.

The scoping report submitted by the applicant can be found at:
https://marine.gov.scot/node/21519

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 their proposed marine licence applications, 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.

The scoping request includes a description of onshore infrastructure and indicates that the previously granted deemed planning permission will be used in respect of the proposed development. Please be advised that there is a likelihood that a new deemed planning will be required. MS-LOT would therefore be grateful if consultees could confirm, if applicable, whether they are content that the onshore aspects are scoped out of proposed EIA report based on the information given in the scoping request should a new deemed planning be required.

Previous application and EIA documentation submitted in 2016 pertaining to the existing s.36 consent and marine licences referred to within the scoping request is available to download here.

Please submit your response electronically to ms.marinerenewables@gov.scot by 24 September 2021. 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.

Yours faithfully,

[Redacted]

Marine Scotland - Marine Planning & Policy

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

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Frequently Asked Questions

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Development Management and Strategic Road Safety
Roads Directorate

Buchanan House, 58 Port Dundas Road, Glasgow G4 0HF
Direct Line: 0141 272 7593, Fax: 0141 272 7350
lain.clement@transport.gov.scot

TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

[Redacted]
Marine Scotland
375 Victoria Road
Aberdeen
AB11 9DB

ms.marinerenewables@gov.scot

Your ref:
21519

Our ref:
GB01T19K05

Date:
24/09/2021

Dear Sirs,

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 2017

FORTHWIND LTD – FORTHWIND OFFSHORE WIND DEMONSTRATION PROJECT – METHIL

With reference to your recent correspondence on the above development, we acknowledge receipt of the Environmental Scoping Request (ESR) prepared by Cierco Ltd 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, we would provide the following comments.

Proposed Development

We understand that in December 2016, Forthwind Ltd secured a Marine Licence and Section 36 (S36) consent from Scottish Ministers for the installation and operation of two demonstration offshore wind turbines sited approximately 1.5km from the coast of Methil. Forthwind Ltd are seeking a new consent to reflect recent changes in both the offshore wind industry and wind turbine technology.

The revised content comprises 1 offshore wind turbine with a nominal capacity of up to 20MW. The turbine design consists of a three-bladed upwind horizontal axis wind turbine with a rotor diameter of up to 225m and a hub height of 156m above Highest Astronomical Tide (HAT).

We also note that a Scoping Report was originally submitted in 2019 with the resultant Marine Scotland scoping opinion being published in November 2019. As the 12-month validity period had passed without a consent application being submitted, Marine Scotland confirmed in February 2021 that it required Forthwind to resubmit the scoping request to update the scoping opinion.

Transport Scotland was consulted on the previous Scoping Report and provided comment in a letter dated 5th June 2019.

Assessment of Environmental Impacts

It is noted that the transportation of the turbine components is described within Chapter 16.1 of the ESR. In this, it is stated that the majority of the turbine components will either be assembled on site or delivered to site by sea, either directly or via a suitable port. There will, therefore, be no abnormal loads generated during the construction phase. The ESR indicates that overall, the traffic generated during construction will be minimal, essentially limited to the transportation of the equipment required for landfall and the delivery of a number of onshore elements to the Fife Energy Park.

Given the limited traffic generated by the development and the lack of potential for likely significant effects to arise, a detailed assessment of traffic effects is scoped out of the EIAR.

With regard to the offshore element of the proposal, it is considered that this will not have any environmental impact on the trunk road network.

We can confirm that we are in agreement with the above conclusions and as such, Transport Scotland has no objection to the proposal in terms of trunk road environmental impacts and we do not require any further information.

I trust that the above is satisfactory but should you wish to discuss, please do not hesitate to contact me or alternatively, [Redacted] at SYSTRA's Glasgow Office on [Redacted] .

Yours faithfully,

[Redacted]

Transport Scotland
Roads Directorate

cc [Redacted] – SYSTRA Ltd.

[Redacted]

From: [Redacted] @whales.org>
Sent: 01 September 2021 11:35
To: MS Marine Renewables
Subject: RE: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

Follow Up Flag: Follow up
Flag Status: Completed

Dear [Redacted]

Thank you for your email. Due to lack of capacity, we will not be responding to the present consultation.

Best wishes,

[Redacted]

End Bycatch

WDC, Whale and Dolphin Conservation
Telephone: [Redacted]
whales.org

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 25 August 2021 16:27
Cc: [Redacted] @gov.scot; [Redacted] @gov.scot
Subject: Forthwind Ltd – Forthwind Offshore Wind Demonstration Project – Methil – Scoping Consultation – By 24 September 2021

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THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 ("the MW EIA Regulations")
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Yours faithfully,

[Redacted]

Marine Scotland - Marine Planning & Policy

Scottish Government **|** Marine Laboratory **|** 375 Victoria Road **|** Aberdeen **|** AB11 9DB

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