

Appendix I: Consultation Representations & Advice

British Telecom

From: [Lees E \(Emma\)](#)
To: radionetworkprotection@bt.com
Cc: [Bamlett R \(Rebecca\)](#); [Mckay J \(John\)](#)
Subject: RE: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 1 August 2022 WID11878
Date: 01 August 2022 14:49:00
Attachments: [image001.png](#)
[image002.jpg](#)

Good afternoon Chris,

Thank you for your response.

Developers planning to access the site will be applying separately for a marine licence to construct devices at the site. It would not be until that time that the precise location would be known.

MS-LOT will take into consideration the comments made regarding the existing BT Link that runs from Wideford Hill to Sanday passing through the Fall of Warness test site.

Should you wish to provide any further comments please provide these to us by 11 August 2022.

Kind regards,

Emma

Emma Lees | Marine Licensing Casework Officer
Marine Scotland - Marine Planning & Policy

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB
Email: emma.lees@gov.scot | Website: <https://www.gov.scot/policies/marine-and-fisheries-licensing/>

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: radionetworkprotection@bt.com <radionetworkprotection@bt.com>
Sent: 22 July 2022 09:55
To: Lees E (Emma) <Emma.Lees@gov.scot>
Subject: RE: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 25 July 2022 WID11878

Good Morning Emma

Thank you for your e-mail

I've read through Table 3-2 of the scoping report.

Although it does refer to 35 devices and their total area coverage, it doesn't give any specifics to their precise locations.

The existing BT Link runs from Wideford Hill 341369/1011687 to Sanday BT RS 363075/1037665
Passing through the Fall of Warness test site boundary.
BT would require 100m meter clearance to the radio link path from any structure.

Once any details are known of where any proposed structures are to be located, we'll be very happy to check all details for you.

Kind Regards
Chris

From: Emma.Lees@gov.scot [<mailto:Emma.Lees@gov.scot>]
Sent: 18 July 2022 10:28
To: radionetworkprotection@bt.com <radionetworkprotection@bt.com>
Subject: RE: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 25 July 2022 WID11878

Good morning Chris,

Thank you for your response.

You will note from the Scoping Report that developers planning to access the site will be applying separately for a marine licence to construct devices at the site. The maximum parameters of these devices will be within that detailed in Table 3-2 of the Scoping Report.

I would be grateful for any further comments you may wish to provide to be sent to us by Monday, 25 July 2022.

Kind regards,

Emma

Emma Lees | Marine Licensing Casework Officer
Marine Scotland - Marine Planning & Policy

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB
Email: emma.lees@gov.scot | Website: <https://www.gov.scot/policies/marine-and-fisheries-licensing/>

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: radionetworkprotection@bt.com <radionetworkprotection@bt.com>

Sent: 21 June 2022 15:39

To: MS Marine Renewables <MS.MarineRenewables@gov.scot>

Cc: Mckay J (John) <John.Mckay@gov.scot>; Bamlett R (Rebecca) <Rebecca.Bamlett@gov.scot>; Lees E (Emma) <Emma.Lees@gov.scot>

Subject: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 14 July 2022
WID11878

OUR REF; WID11878

Good afternoon Emma

Thank you for your email dated 14/06/2022.

We have studied this proposal with respect to EMC and related problems to BT point-to-point microwave radio links.

I've included a couple of illustrations below of the site in questions

Please note the continuous red line that indicates the path of an existing BT Link, it passes just inside the southern part of test site boundary

If there's any structures to be constructed in this area, can you give details of height and grid-ref's please.

Regards

Chris

Crown Estate Scotland

From: [Adam Heffill](#)
To: [MS Marine Renewables](#)
Subject: RE: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 14 July 2022
Date: 08 July 2022 10:40:36

Dear Sir/Madam,

We have no comments to make in respect of this request for a scoping opinion.

Kind regards,
Adam

Adam Heffill
Asset Manager
Crown Estate Scotland
[redacted]

www.crownestatescotland.com
@crownestatescot

-
Our team are currently working from home. Mail is occasionally being collected from our offices (addresses are at www.crownestatescotland.com/contact-us). Where possible, please email or call us rather than post mail.

LEGAL DISCLAIMER - IMPORTANT NOTICE The information in this message, including any attachments, is intended solely for the use of the person to whom it is addressed. It may be confidential and it should not be disclosed to or used by anyone else. If you receive this message in error please let the sender know straight away. We cannot accept liability resulting from email transmission. Crown Estate Scotland's head office is at Crown Estate Scotland, Quartermile Two, 2nd Floor, 2 Lister Square, Edinburgh, EH3 9GL.

Chamber of Shipping

From: [Robert Merrylees](#)
To: [MS Marine Renewables](#)
Cc: [Mckay J \(John\)](#); [Bamlett R \(Rebecca\)](#)
Subject: RE: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 14 July 2022
Date: 04 July 2022 12:25:05

Dear Marine Scotland,

The Chamber of Shipping offers a nil return on the Scoping Report noting that has discussed specific NRA matters for the EMEC sites with the risk consultation NASH Maritime.

Kind regards,

Robert

Robert Merrylees

Policy Manager (Safety & Nautical) & Analyst

UK Chamber of Shipping

30 Park Street, London, SE1 9EQ

[redacted]

rmerrylees@ukchamberofshipping.com

www.ukchamberofshipping.com

Historic Environment Scotland



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: 300030951

21 June 2022

Dear Marine Scotland

**The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017
European Marine Energy Centre - Consultation on Request for Scoping Opinion for the
Fall of Warness Tidal Test Site, Orkney
Scoping Report**

Thank you for your consultation which we received on 14 June 2022 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).

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

Proposed Development

We understand that this proposal is for the extension to the end date of the current S36 consent to operate the Fall of Warness tidal test site for another 3 years until March 2026.

Our advice

The site activities lie within the project described in the 2014 Environmental Appraisal and this is not intended to change until 2026. This means that for our interests, there is no change in the environmental impacts assessed in the original Environmental Appraisal.

We are content with the conclusions of the Scoping Report which finds that there will be no impact requiring further assessment as part of the EIA process, and marine archaeology and cultural heritage will not be considered further.

Historic Environment Scotland – Longmore House, Salisbury Place, Edinburgh, EH9 1SH

Scottish Charity No. **SC045925**

VAT No. **GB 221 8680 15**



HISTORIC
ENVIRONMENT
SCOTLAND

ÀRAINNEACHD
EACHDRAIDHEIL
ALBA

Further information

Guidance about national policy can be found in our 'Managing Change in the Historic Environment' series available online at www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes. Technical advice is available on our Technical Conservation website at <https://conservation.historic-scotland.gov.uk/>.

We hope this is helpful. Please contact us if you have any questions about this response. The officer managing this case is Chloe Porter and they can be contacted by phone on 0131 668 8653 or by email on chloe.porter@hes.scot.

Yours faithfully

Historic Environment Scotland

From: [Chloe Porter](#)
To: [Lees E \(Emma\)](#)
Subject: RE: Request for Scoping Opinion for the Fall of Warness Tidal Test Site, Orkney - Requesting clarity on response - by 15/08/2022
Date: 18 August 2022 10:08:15
Attachments: [20220621_EIA_Scoping_HES_Response.pdf](#)
[Screening of Proposed Section 36 Consent Variation - Fall of Warness Tidal Test Site Orkney.msg](#)
[Request for Scoping Opinion for the Fall of Warness Tidal Test Site Orkney.msg](#)

Good morning Emma,

I apologise for the delay in responding to this- I am just back from leave.

You are right there was a crossover in the response.

What it should have said was- We are content with the Scoping opinion proposed and with its conclusions which say that marine archaeology and cultural heritage will not be considered further as there will be no impact requiring further assessment.

We hope this is helpful and apologies again for the delay and the confusion over this.

Kind Regards,

Chloé

Chloé Porter (MRTPI) | Senior Historic Buildings Adviser | Planning, Consents and Advice Service | Heritage Directorate

We inform and enable good decision-making so that the historic environment of Scotland is valued and protected.

Historic Environment Scotland | Àrainneachd Eachdraidheil Alba

Longmore House, Salisbury Place, Edinburgh EH9 1SH

[redacted]

E: chloe.porter@hes.scot

To find out more about our work please sign up to Lintel, our quarterly heritage newsletter:

<https://scot.us10.list-manage.com/subscribe?u=976c9ed1385d3e05a577653e4&id=9927e7b28d>

www.historicenvironment.scot

Historic Environment Scotland - Scottish Charity No. SC045925

Registered Address: Longmore House, Salisbury Place, Edinburgh, EH9 1SH

---Original Message-----

From: Emma.Lees@gov.scot <Emma.Lees@gov.scot>

Sent: 01 August 2022 17:53

To: Laura Denholm <laura.denholm@hes.scot>

Cc: Heritage - Consultations Mailbox <HMConsultations@hes.scot>

Subject: RE: Request for Scoping Opinion for the Fall of Warness Tidal Test Site, Orkney - Requesting clarity on response - by 15/08/2022

Good afternoon,

I refer to the above consultation and the response received thereto.

There appears to be a slight crossover in the response in that the response makes reference to consideration of the scoping report however, the advice relates to the recent consultation on the Fall of Warness screening report in relation to the proposed extension to the current s.36 consent.

I would be most grateful if you could clarify the HES response in relation to the scoping report only and if this could be submitted to us by no later than 15 August 2022

Kind regards,

Emma

Emma Lees | Marine Licensing Casework Officer Marine Scotland - Marine Planning & Policy

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB
Email: emma.lees@gov.scot | Website: <https://www.gov.scot/policies/marine-and-fisheries-licensing/>
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

-----Original Message-----

From: Laura Denholm <laura.denholm@hes.scot>

Sent: 21 June 2022 14:02

To: MS Marine Renewables <MS.MarineRenewables@gov.scot>

Subject: Request for Scoping Opinion for the Fall of Warness Tidal Test Site, Orkney

Kind regards

Laura

Laura Denholm | Business Support Officer – Casework Technician | Heritage Directorate Historic Environment Scotland | Àrainneachd Eachdraidheil Alba Longmore House, Salisbury Place, Edinburgh, EH9 1SH
[redacted]

E: laura.denholm@hes.scot

www.historicenvironment.scot

To find out more about our work please sign up to Lintel, our quarterly heritage newsletter, [here](#).

Heritage For All - read our new Corporate Plan and help to share our vision

Kirkwall and St Ola Community Council

From: [Holm CC](#)
To: [Lees E \(Emma\)](#)
Subject: Re: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 14 July 2022 - Nil response
Date: 15 July 2022 12:24:50

Hi Emma

Unfortunately this coincided with a period of no community council due to elections.

Kind regards
Hazel

Sent from my iPad

Marine Analytical Unit

Tidal test site at Fall of Warness, Orkney

Marine Analytical Unit Response

The Fall of Warness Scoping report includes descriptions of a range of potential impacts. This response focuses only on the assessment of social and economic impacts.

Marine Scotland is producing guidance on how to carry out Socio-Economic Impact Assessments for offshore renewable developments. The guidance is still in draft form and so cannot be shared, but the recommendations included in this response align with the broad contents of the guidance document and the principle of a proportional approach.

Socio-economic impacts

The socio-economic chapter is called "Socio-economic, other sea users and tourism", but includes no mention of data, baselines, effect pathways or scoping of socio-economic impacts. Only 'other sea users' and 'recreation and tourism' are considered.

We appreciate that the application does not relate to a new project, but rather is a proposed change to the existing Fall of Warness site, and as such extensive socio-economic impacts may not be anticipated. Nonetheless these impacts should be considered in the scoping report and a justification given for scoping them in/out.

Impacts scoped in/out

For the most part, Marine Scotland agrees with the impacts that have been scoped in/out. The section on recreation and tourism should make reference to the section on 'Marine Archaeology and Cultural Heritage, as archaeology is an important tourist attraction and an impact on this receptor could have a knock on effect for tourism. Impacts on 'Marine Archaeology and Tourism' have largely been scoped out or considered minimal, and so we are satisfied that there would be no related impacts on tourism.

In the section on 'Potential effects of device deployment (and decommissioning)', there are two impacts described for the 'Temporary impacts on the economic value of tourism and recreation activities' impact pathway. The potential importance section states "No effect – Effects could be negative if Project activities deter visitors, but could on the other hand lead to demand for bedspaces locally to accommodate the proportion of the workforce that is non-locally based." Two impacts are listed here and so it is surprising to see this described as no effect. The assumption seems to be that these impacts cancel each other out. We do not feel this is a valid assumption, as the positive and negative effects could be felt in different places, or only one effect could come to pass.

Inclusion of positive impacts

As no socio-economic impacts are included, potential positive impacts linked to the site are not mentioned. We would imagine that there may be jobs, generation of skills and expertise etc. linked to the site and the facility. These are not mentioned.

Engagement

The list of organisations that have been included in consultation activities thus far is fairly limited. Crucially it does not include Orkney Islands Council or any other local groups. We appreciate that the project involves extending an existing project, and the impacts are expected to be minor, however stakeholder engagement is an important part of socio-economic impact assessment and we would expect a more comprehensive list of consultees to be engaged with for the EIA.

Maritime Coastguard Agency



Maritime &
Coastguard
Agency

Nick Salter
Maritime and Coastguard Agency
UK Technical Services – Navigation
105 Commercial Road
Southampton
SO15 1EG
www.gov.uk/mca

Emma Lees

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

30 June 2022

Dear Ms Lees

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR THE FALL OF WARNESS TIDAL TEST SITE, EUROPEAN MARINE ENERGY CENTRE, ORKNEY

Thank you for your email dated 15 June 2022 requesting comments on the scoping report provided by EMEC for the Fall or Warness (FoW) tidal test site. The MCA welcomes the opportunity to provide comments under the above Environmental Impact Assessment Regulations, and we would comment as follows:

The MCA met with EMEC and their navigation risk consultants in December 2021 to discuss the site-wide Navigation Risk Assessments (NRA) for all the EMEC test sites off Orkney. The FoW site was discussed, and it is understood that this s.36 application does not intend to increase the current consented boundary. We would expect the site-wide NRA completed in 2019 to be updated with up-to-date traffic data and to reflect the current MCA guidance, MGN654. The NRA should be accompanied by a detailed MGN 654 Checklist which can be found at:

<https://www.gov.uk/guidance/offshore-renewable-energy-installations-impact-on-shipping>

The Environmental Impact Report should supply detail on the possible impact on navigational issues for both commercial and recreational craft, specifically:

- Collision Risk
- Visual intrusion and noise
- Risk Management and Emergency response
- Marking and lighting of site and information to mariners
- Effect on small craft navigational and communication equipment
- The risk to drifting recreational craft in adverse weather or tidal conditions
- The likely squeeze of small craft into the routes of larger commercial vessels
- Risk controls including those appropriate for deployment of device testing.

On the understanding that the Shipping and Navigation aspects are undertaken in accordance with MGN 654 and its annexes, along with a completed MGN checklist, MCA is likely to be content with the approach.

Yours sincerely,

Nick Salter, Offshore Renewables Lead, UK Technical Services - Navigation

Marine Scotland Science

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

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

23 July 2022

EUROPEAN MARINE ENERGY CENTRE - CONSULTATION ON REQUEST FOR SCOPING OPINION

Marine Scotland Science (MSS) have reviewed the Scoping Report submitted by the European Marine Energy Centre (EMEC) for the Fall of Warness tidal energy development in relation to ornithology (Section 8 Offshore Ornithology) along with the consultation responses from RSPB (dated 22 July 2022) and NatureScot (NS, dated 17 August 2022) and provide the following comments.

**No Comments = "We have considered the request and have no advice to provide."*

Marine Ornithology

While the exact details of this development cannot be specified at the time of application due to the nature of the development, i.e. being a site focussed on demonstration of novel technologies; MSS are content with the design envelope approach used to determine a worst-case scenario approach taken to inform the scoping opinion. RSPB were also supportive of this approach but asked that the developer seek to minimise the range of parameters and omit unrealistic options early, a point that MSS supports.

MSS highlight that the developer proposes to use existing boat-based ESAS survey data for baseline characterisation, these surveys were undertaken between 2012 and 2014. In line with the responses from both RSPB and NS, MSS highlight that these data are now >5 years old (typically accepted as the minimum age for baseline data) and are thus out of date. The developer proposes an approach to adjust the previous survey numbers using more recent population abundance data. However, as RSPB note at sea densities are not only determined by population abundance but also inter alia changes in the environment including in prey distribution. RSPB propose that two full years of new baseline survey data are collected while NatureScot advise that a 'minimum of one year' of further data collection. MSS suggest that it may be sufficient to collect a single further year of baseline data if the survey results are found to be consistent with the earlier datasets, however if abundances and distribution are found to differ significantly from the earlier dataset then a full two years of baseline data would be appropriate. In either case there will need to be subsequent agreement reached on how densities are calculated to inform the subsequent assessment.

Both RSPB and NS highlight the ongoing highly pathogenic avian influenza (HPAI) outbreak affecting seabirds and other waterbird species in Scotland and beyond. At this time the population impacts of the HPAI outbreak are unclear but are thought to be potentially substantial for at least some sites and species. MSS suggests that further discussion will be required between the developer and Marine

Scotland and NS (and RSPB where relevant) as the application develops to determine how the impacts of HPAI should be considered in the application.

MSS are content with the approach to collision risk modelling (including a range of values and worst-case scenarios) which appears to be in line with NS guidance. RSPB appear to be broadly content with the stated approach though note that the collision risk modelling approaches for tidal developments are subject to considerable uncertainty given the lack of validation data. MSS note that NS do not provide specific comment on the approach to collision risk modelling in their response but have noted that they are already in detailed discussions with the developers and their consultants around this (a meeting on the 5 July 2022 is cited under the marine mammal section relating to collision risk modelling). MSS note that MS-LOT may wish to confirm with the developer and NatureScot what agreement has been reached around collision risk modelling approaches so that this can be detailed in the Scoping Opinion.

The proposed approach to assessing Displacement and Disturbance and Bright Lighting (8.6 Summary and ES appraisal, p69) is vague so may require further discussion for agreement of appropriate assessment approaches.

MSS are broadly content with the scoping of impacts with regards to marine ornithology (8.3 Effect Pathways, p63), the potential effect pathways for Deployment/Decommissioning (Table 8-4) and Operation and Maintenance (Table 8-5).

NatureScot note the potential for impacts on marine birds from movements of vessels between ports/harbours and in/around the development which is relevant at all project phases. MSS are in agreement with NS that movement of vessels should be scoped in for both EIA and HRA. Depending on the findings of the assessment then it may be appropriate to implement a Vessel Management Plan to reduce disturbance impacts from this impact pathway.

MSS understand that there will be a separate HRA screening so do not provide detailed comments on this here. Within their consultation response NatureScot provided quite detailed feedback on SPA sites to be included. In the Scoping Report it is stated that SPAs within 100 km of the site will be considered (page 61), however, in common with NS, MSS advise that screening should be based on species specific foraging ranges rather than a single threshold distance.

NatureScot and RSPB both note that demonstration sites should be used to increase our knowledge around the environmental impacts of these developments to inform reducing uncertainty in future assessments. The Scoping Report notes that project-specific Project Environmental Monitoring Plans (PEMPs) will be required by each project within the EMEC array. MSS welcome this commitment and note that there would be benefit in taking a coordinated approach to monitoring and reporting where possible, as this would likely be more informative than many smaller uncoordinated monitoring studies.

Marine Mammals

MSS have reviewed the EMEC Falls of Warness Scoping Report, with specific focus to chapters 10 and 11. MSS agree with the data sources listed for cetaceans and the list of species scoped in. With regards to seals, Carter *et al* (2022) should be used for seal density and estimated abundance, and included in the key data sources (table 11-1).

MSS are largely content with the potential effects pathways scoped in (i.e. noted as ‘potentially important’ in the scoping report). For both seals and cetaceans, entanglement in lines or cabling leading to injury or death should be extended to include entanglement in discarded (“ghost”) fishing gear which itself becomes entangled in lines or cabling. Given tension and thickness of anchor lines, fishing gear is potentially the more likely risk to entanglement in this case. MSS recommend this impact pathway is scoped in for both seals and cetaceans.

MSS recommend that changes to hydrodynamic and sediment regime are also scoped into the effects pathways for seals, as they have been for cetaceans. MSS also agree with NS that barrier effects should be scoped in for both cetaceans and seals.

The assessment of collision risk is welcomed. MSS recommend that in addition to the NatureScot guidance, mortality thresholds derived from Onoufriou et al. (2019) are considered to scale collision rate into an estimate of likely population level impact for both seals and cetaceans.

Marine fish ecology

MSS have reviewed the EMEC Fall of Warness Scoping Report. The project description has not been clearly explained and it is confusing to work out what changes are proposed.

The wording suggests that the only changes are to extend the project duration to 2040 and increase the generating capacity to 50 MW. However, MSS understand that the changes also include increasing the number of tidal test berths to up to 20 which will include more cabling. The current number of berths is not clear as Section 1.3 says that there are currently 8 berths, but section 3.3 says that there are 7 berths? With the increasing number of berths, it is not clear if this will extend the boundary area of the Fall of Warness site to accommodate more berths or if more berths will be included in the current site area. MSS would like to query this in order to fully understand the proposed project.

MSS are largely content with all the effect pathways proposed to be scoped in and out of the EIA. However, MSS would query whether 'collision with turbine blades leading to injury or death' as an effect pathway is scoped in for marine fish? It is currently unclear as 'Collision with turbine blades leading to injury or death' is included in Table 7-4 as a 'potentially important' effect on marine fish but it is missing in the summary table 7-6 and appears to be scoped out. If it has been scoped out, there is no justification provided behind this decision.

With regards to electromagnetic field (EMF) effects on marine fish species, EMF effects are only mentioned in reference to shark, skates and rays as being sensitive to EMF. Whilst this is accurate, MSS also recommend consideration of other marine fish species such as demersal marine fish species e.g. cod and haddock and pelagic marine fish species e.g. herring which may also be sensitive to EMF. EMF effects on pelagic marine fish species will be of particular concern for any dynamic cabling in the water column from any floating platforms.

Commercial fisheries

As mentioned in the Marine Fish Ecology advice section, MSS query whether the Fall of Warness site boundary is being extended to accommodate the new berths? If so, this would have potential spatial implications for fisheries. If the area is not being increased, then MSS are content for commercial fisheries to be scoped out of the EIA considering that there has been no fishing activity identified in the Fall of Warness site since it has been operational (since 2005) and the site boundary is not changing.

Diadromous fish

As the scoping report acknowledges, there is a lack of information on the occurrence of diadromous fish at the Falls of Warness site, but MSS agree that Atlantic salmon, sea trout and European eel are likely to be present. There is also a lack of information on what rivers any Atlantic salmon and sea trout that are present are likely to be associated with, but MSS agree that there is potential connectivity of salmon with the Thurso and Naver salmon SACs and indeed other salmon SACs, such as the Borgie SAC.

MSS are content with the assessment in Table 7.3 and 7.4 of the importance of potential effect pathways for diadromous fish, although various assumptions in the tables are questionable;

- that diadromous fish are always mobile in the marine environment, which is not the case – they may be foraging rather than actively migrating, for example,
- that diadromous fish will move away from unfavourable conditions,
- that diadromous fish will not aggregate around structures, and may not apply in all circumstances.

MSS welcome the proposed collision risk modelling for salmon, which appears from the information which is given to be potentially very informative.

MSS agree with all the main points made by NatureScot in their comprehensive response of 17th August, insofar as they apply to diadromous fish. However, both NatureScot and EMEC appear to have overlooked the Borgie SAC, which includes salmon as a species interest; and Foinaven SAC does not include salmon as a species interest, although some populations of freshwater pearl mussel, which is a species interest, may be dependent on them.

Benthic Ecology

MSS understand that maerl gravel was identified on part of an ROV survey in 2010. Although no live maerl was identified, it should be noted that dead maerl provides structure and can have an important functional role (Sheenan et al., 2015), forming part of the identification of maerl beds as a Priority Marine Feature (see description provided in [Review of PMFs outside the Scottish MPA network FINAL Maerl beds.pdf \(consult.gov.scot\)](#)). Recent maerl bed records in Orkney along with descriptions can be found in Shucksmith et al. (2021).

MSS understand that a number of benthic surveys have been carried out at the site. However, it is difficult to comprehensively assess the spatial distribution of survey effort across the life of this project from all data sources in relation to the various aspects of the development from the scoping report.

No seagrass beds have been recorded at the test site based on current publications. However, anecdotal evidence suggests that seagrass exists in the shallow water off the south west coast of Eday (Lilley, 2022 Pers. Comm).

Orkney is known to be a good location for seagrass but many areas have low survey effort. Ongoing drone surveys and satellite mapping by [Project Seagrass](#) and others may provide more up to date knowledge on shallow subtidal habitats in the area. Some large seagrass beds have been recently found in Orkney (e.g. Westray) and such records are not yet published on NMPI.

Changes to the hydrodynamics and sediment regime could have positive or negative knock-on effects on seagrass habitat suitability. MSS agree with NatureScot that benthic characterisation survey work may be required where gaps exist. Given the potential indirect effects and depth band that seagrass tend to grow in, these surveys will need to extend to the shallow areas (i.e. just outside the site boundary) off the south east coast of Eday. Collaboration with Project Seagrass may add value to survey effort and improve predictive power for satellite mapping work.

Although it is likely that any changes to seagrass distribution will have already occurred due to the existing infrastructure, it is worth noting the new habitat records and exploring the potential for any further changes.

MSS agree with the potential effects described for benthic species and habitats in the scoping report. However, the effect of Electromagnetic Fields (EMF) is concluded to be not important because current information suggests that only a limited range of benthic fish species are expected to be of particular sensitivity to EMF. MSS do not agree with this statement. There is a growing body of evidence around the potential impact of EMF at different trophic levels including benthic species (e.g. review by Albert et al., 2020 and example by Stankevičiūtė et al., 2019).

The EMF impact pathway is complex - for example, reducing the EMF may not reduce the impact as some species may become attracted or repelled at lower levels (see Hutchison et al. (2020) and

references within). Specific information on *in situ* EMF measurements is lacking, as is research on the response of many benthic species to such levels of EMF. MSS are planning strategic research which will make progress towards addressing these knowledge gaps. However, given the uncertainty around the issue of EMF and the increase in the number and overall length of cables proposed in this extension, MSS advise that the effects of EMF on benthic species should be scoped into the EIA.

Physical environment / coastal processes

Cumulative impacts: Consideration should be given to the water column impacts for the scenario of the fully occupied EMEC site, in combination with other proposed development around Orkney. Namely developments in Westray Firth, Lashy sound and Stronsay Firth, as these developments would experience tidal interactions with the Fall of Warness EMEC site. The potential impact on tidal elevation, speeds and phases across the Orkney region should be studied.

MSS agree with NatureScot that the use of modelling tools should not be ruled out. The proposed spreadsheet based methods may be adequate for sediment transport processes, but the use of at least a 2D hydrodynamic model should be considered to study potential changes in tidal speeds, elevations and phases for a fully occupied EMEC site and in combination with Orkney development (see cumulative impacts above). If sufficient and relevant evidence exists in the literature, then the use of hydrodynamic modelling could be avoided. MSS do however recommend the use of hydrodynamic modelling to study changes to the tide, and they should not be ruled out at this scoping stage

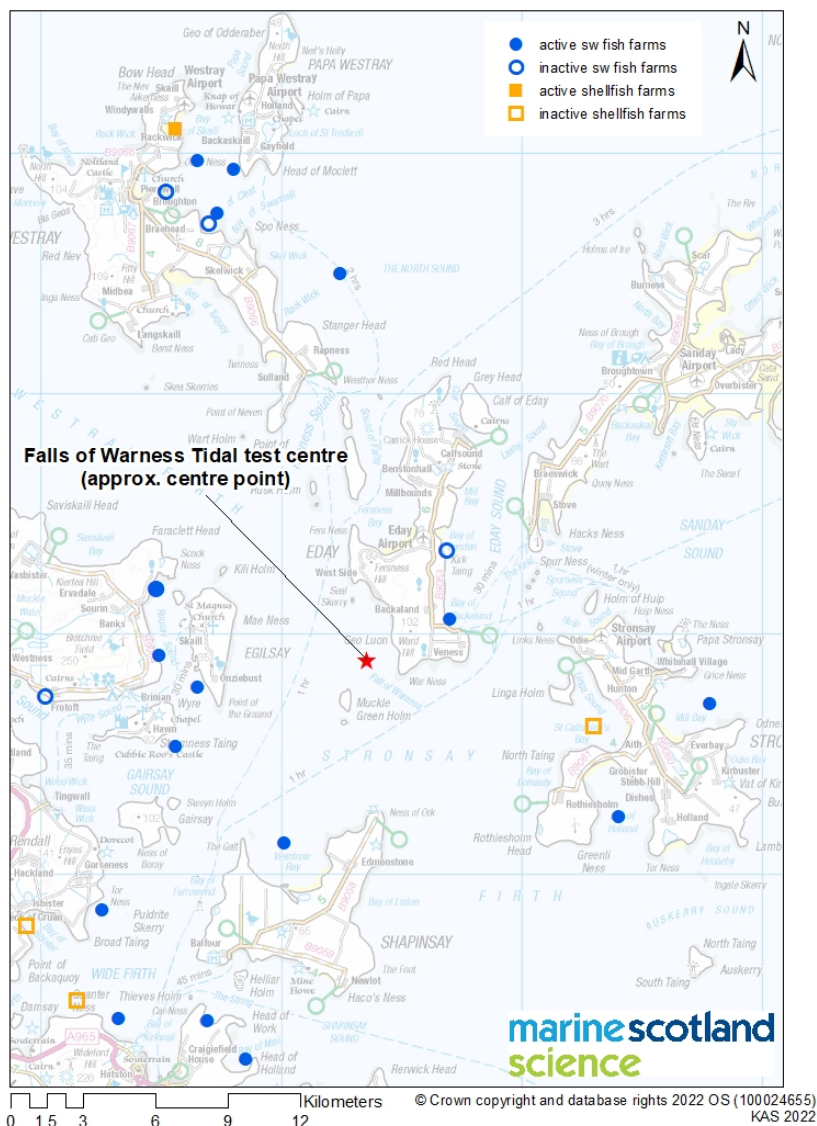
MSS agree with NatureScot that a figure showing indicative locations of berths and cables should be provided, and it would be useful if sediment type and bathymetry data be overlaid on this figure.

Aquaculture

There are currently no aquaculture sites registered with Marine Scotland Science located in the immediate vicinity of the Fall of Warness development which is proposed to be modified by EMEC (European Marine Energy Centre) Ltd. (see map attached).

In section 13.2.2.2. of the Scoping report submitted, the applicant correctly identifies the nearest active aquaculture sites. Since MSS provided comment on the original development in 2016 there have been several new marine pen aquaculture sites developed in Orkney including two near Stronsay and one near Westray. However, none of these new sites are closer to the development than the sites previously identified. The closest new site is in Bay of Holland on the South coast of Stronsay, ~13km south west of the southern edge of the Fall of Warness development boundary (see attached map). Furthermore, to our knowledge there are no proposed sites currently in the planning system in this vicinity.

**Aquaculture sites in the vicinity of development to be modified at
Falls of Warness tidal test centre, west of Eday, Orkney
by EMEC (European Marine Energy Centre)**



Chemistry

No comments to provide.

References

Albert, L., Deschamps, F., Jolivet, A., Olivier, F., Chauvaud, L. and Chauvaud, S., 2020. A current synthesis on the effects of electric and magnetic fields emitted by submarine power cables on invertebrates. *Marine environmental research*, 159, p.104958. [A current synthesis on the effects of electric and magnetic fields emitted by submarine power cables on invertebrates - ScienceDirect](#)

Carter, M. I., Boehme, L., Cronin, M. A., Duck, C. D., Grecian, W. J., Hastie, G. D., ... & Russell, D. J. (2022). Sympatric seals, satellite tracking and protected areas: habitat-based distribution estimates for conservation and management. *Frontiers in Marine Science*.
<https://www.frontiersin.org/articles/10.3389/fmars.2022.875869/full>

Hutchison, Z.L., Secor, D.H. and Gill, A.B., 2020. The interaction between resource species and electromagnetic fields associated with electricity production by offshore wind farms. *Oceanography*, 33(4), pp.96-107.

Onoufriou, J., Brownlow, A., Moss, S., Hastie, G., & Thompson, D. (2019). Empirical determination of severe trauma in seals from collisions with tidal turbine blades. *Journal of Applied Ecology*, 56(7), 1712-1724.

Sheehan, E.V., Bridger, D. and Attrill, M.J., 2015. The ecosystem service value of living versus dead biogenic reef. *Estuarine, Coastal and Shelf Science*, 154, pp.248-254.

Shucksmith R. J., Shelmerdine R. L., Shucksmith R. (2021) Biological analyses of seabed imagery from within and around Marine Protected Areas in Orkney, Shetland, Inner Sound, and Islay and Jura in 2019 [Scottish Marine and Freshwater Science \(SMFS\) Vol 12 No 2.pdf](#)

Stankevičiūtė, M., Jakubowska, M., Pažusienė, J., Makaras, T., Otremba, Z., Urban-Malinga, B., Fey, D.P., Greszkiewicz, M., Sauliūtė, G., Baršienė, J. and Andrulewicz, E., 2019. Genotoxic and cytotoxic effects of 50 Hz 1 mT electromagnetic field on larval rainbow trout (*Oncorhynchus mykiss*), Baltic clam (*Limecola balthica*) and common ragworm (*Hediste diversicolor*). *Aquatic toxicology*, 208, pp.109-117.

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

NatureScot

Emma Lees
Marine Scotland
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

17 August 2022

Our ref: CNS/REN/TP/EMEC

By Email Only

Dear Emma,

**REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR THE FALL OF
WARNESS TIDAL TEST SITE, EUROPEAN MARINE ENERGY CENTRE, ORKNEY**

NATURESCOT ADVICE ON EIA SCOPING REPORT

Thank you for consulting NatureScot on the Environmental Impact Assessment (EIA) scoping report, submitted by EMEC, for a proposed Section 36 application for the Fall of Warness tidal test site, EMEC, Orkney.

Our advice on the natural heritage interests to be addressed within the Environmental Impact Assessment Report (EIA Report) for this project is outlined below.

Policy context

We are currently facing two crises, that of climate change and biodiversity loss and as the Scottish Government's adviser on nature, our work seeks to inspire, enthuse and influence others to manage our natural resources sustainably.

NatureScot works in support of the Scottish Government's vision for an energy sector that delivers secure, affordable and clean energy for Scotland¹. We provide advice in the spirit of Scotland's National Marine Plan² which balances the promotion of the sustainable development of tidal renewable energy, whilst protecting our biodiversity and taking account of seascapes, landscapes and visual impacts.

We welcome the positive impact that EMEC has had on both the practical deployment of test devices as well as increasing understanding of wildlife interactions around tidal devices. We support the facilities of a test centre as it enables greater economies of scale in undertaking baseline surveys as well as deployment monitoring across the site and individual devices / arrays. Demonstration sites are not just about testing and demonstrating technical and engineering aspects, but also about increasing our knowledge on wildlife interactions.

Background

The EMEC Fall of Warness tidal test site was established some 17 years ago in 2005. The current Section 36 consent allows for up to 10 MW and expires in March 2023. Although the associated generation connection agreement allows for 4MW export capacity which will increase in this year to 7.2MW.

The test site currently has eight installed berths and enables up to 12 simultaneous devices to be tested providing they remain within the agreed project envelope for devices and operation³. Developers can install their device(s) and undertake testing activities after securing a project-specific marine licence. Each test berth is individually connected to EMEC's shore-based substation at Caldale in Eday via an 11 kV armoured subsea cable, allowing onward transmission of the energy generated by the devices to the National Grid.

Proposal

The project description is covered in Section 3 of the scoping report.

EMEC seek a new Section 36 consent to extend the existing licence period to 2040 (in line with their Crown Estate Scotland site lease) and increase the site generating capacity up to 50 MW. This also includes a significant increase in many of the parameters within the project envelope (previously consented) for devices and operations, as shown in table 3.1 and table 3.2 in section 3.4 of the scoping report. Please see Table 1 in Appendix A for a comparison of the key maximum parameters and technologies. Please note, we consider that some information has not been provided to enable a direct comparison between what is proposed and what is consented – we advise this comparative information should be provided in the forthcoming Environmental Impact Assessment Report.

¹ Scottish Government (2021) Energy Strategy: Position Statement. Available at: <https://www.gov.scot/publications/scotlands-energy-strategy-position-statement/> (Accessed: 16 August 2022)

² Scottish Government (2015) Scotland's National Marine Plan. Available at: <https://www.gov.scot/Publications/2015/03/6517> (Accessed: 16 August 2022)

³ EMEC (2014) EMEC Fall of Warness Test Site: Environmental Appraisal August 2014. Available at: https://www.emec.org.uk/?wpfb_dl=168 (Accessed: 16 August 2022)

We highlight the key maximum parameter comparisons below:

- The existing site has 9 berths of which 8 are connected. The proposed site will have 20 connected berths.
- Up to 12 simultaneous devices can be installed at the existing site. The proposed site will have 35 simultaneous devices.
- Both the existing and proposed maximum rotor diameter is approximately 25 m.
- Each berth at the existing site occupies a circular area of approximately 200m radius from the cable end, within which developers can install their device(s) and undertake testing activities. The scoping report does not mention what the area will be for the new berths, but it does mention a maximum of 8 electrical hubs each with an area of 500m².
- The existing site has up to 14 vessels operating across the whole site simultaneously. The proposed site will have up to 15 vessels operating across the whole site simultaneously.
- The existing site has simultaneous noisy installation activities at a maximum of 2 berths. The proposed site will have simultaneous noisy installation activities at a maximum of 4 berths.
- The existing site has simultaneous inspection/maintenance activities at a maximum of 2 berths. The proposed site will have simultaneous inspection/maintenance installation activities at a maximum of 4 berths.

The following activities and deployments are included within the proposed project envelope:

- Testing activities associated with single device and array deployments, including regular installation, maintenance and decommissioning works;
- Testing of mooring systems and foundation arrangements (e.g., tripod support structures or individual stand-alone components of devices);
- Installation, maintenance and testing of subsea cables;
- Deployment of scientific instrumentation and associated cabling;
- Testing of buoys (maximum of two simultaneous tests); and
- Potential for simultaneous operations, i.e., installation or maintenance activities, at more than one berth at the same time.

The scoping report relates to infrastructure and assets below the Mean High Water Spring (MHWS). The project envelope does not include any potential future onshore works, which would require consideration under the Town and Country Planning (Scotland) Act 1997.

We request that the indicative locations for test berths and subsea cables are provided on a map within the proposed Section 36 consent application.

Approach to Impact Assessment

While we are mindful that the test site has been operational for nearly 20 years, the proposal includes a significant increase to the number and size of devices to be deployed and their associated activities - were the maximum project envelop to be fulfilled, this would represent the largest tidal array in Scotland, if not in the world.

EMEC undertook wildlife survey at the Fall of Warness from 2005 to 2014. We advise that this data is now too old (approximately 8 years old) and insufficient to provide a suitable baseline to underpin the forthcoming EIA and HRA particularly with respect to ornithological receptors including the recently designated Scapa Flow and North Orkney SPA. Westray South tidal site data is also considered too old and does not cover the EMEC site. As such we advise that a minimum of one year of baseline characterisation data is collected to inform the ornithological impact assessment. Additional surveys may also be required to support assessment of impacts associated with vessel movements, but insufficient information is provided to enable us to determine requirements at this stage. We would welcome the opportunity to provide further advice on survey methodology.

Evidence derived from post-consent monitoring of tidal deployments to date at Fall of Warness and other lease sites should also help inform EIA and HRA.

The current unprecedented Highly Pathogenic Avian Influenza (HPAI) epidemic is impacting many species of breeding seabirds, including diving species such as gannets and auks. There have also been some deaths of eider and other waterbirds. The effects on future populations have yet to be determined. NatureScot and Marine Scotland are working through the implications of HPAI for seabirds as well as more widely our wild bird populations. This will impact our considerations of anthropogenic impacts and their assessment as well as ongoing monitoring/surveillance requirements. We will keep developers informed, but it is too early to provide any further clarity at this stage.

HRA Screening

The HRA will be screened separately from this scoping report, however the European sites which at this point are considered likely to require further assessment are discussed throughout the assessment chapters of the scoping report, and feedback is sought on whether or not this covers all sites that stakeholders would expect to see assessed. We have included feedback on European sites which we would expect to be included in the HRA in our advice below.

Natural heritage interests to be considered

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

- Advice on hydrodynamic and physical processes is provided in **Appendix B**.
- Advice on the benthic interests is provided in **Appendix C**.
- Advice on fish and shellfish interests is provided in **Appendix D**.
- Advice on ornithological interests is provided in **Appendix E**.
- Advice on marine mammal and basking shark interests is provided in **Appendix F**.
- Advice on otter interest is provided in **Appendix G**.
- Advice on seascape, coastal character and visual amenity is provided in **Appendix H**.

Further information and advice

The Welsh Government has recently published various Information Notes⁴ which may be of use/ interest to the applicant. The Information Notes detail how science and evidence is applied to support the consenting of wave and tidal stream technologies.

NatureScot will continue to provide further advice on natural heritage interests. Please contact myself, Jenna Lane, or Chris Eastham in the first instance for any further advice.

Yours sincerely,

Jenna Lane

Marine Sustainability Adviser

Jenna.lane@nature.scot

[redacted]

⁴ Welsh Government (2022) Marine renewable energy: environmental information notes. Available at: <https://gov.wales/marine-renewable-energy-environmental-information-notes> (Accessed: 16 August 2022)

APPENDIX A – COMPARISON OF KEY MAXIMUM PARAMETERS BETWEEN THE EXISTING SITE AND THE PROPOSED SITE

Table 1 - Comparison of key maximum parameters

Project element/activity	Maximum parameter	
	Existing site	Proposed site
Number of berths	8 installed with maximum of 9	20
Site generating capacity	10 MW	50 MW
Device characteristics		
Number of simultaneous devices	12	35
Maximum swept area of each device	~500 m ² (25 m rotor diameter)	500 m ² (~25 m rotor diameter) – <i>note the EIA scoping report states 5,000 m² which we think is an error.</i>
Rotor depth - minimum clearance from sea surface	2.5 m	2.5 m
Device structures		
Distance above sea surface for surface-piercing elements	Not stated in Environmental Appraisal project envelope (EMEC, 2014)	18 m (at MLWS), excluding navigational and communication equipment
Length and width of floating structures	Not stated in Environmental Appraisal project envelope (EMEC, 2014)	The sea surface area for surface piercing elements, when in operational mode, should be no greater than 780 m ²
Subsea cables to shore		
Export Cables per berth	Not stated in Environmental Appraisal project envelope (EMEC, 2014)	Max. of 5 km per berth
Number of connected cables	Not stated in Environmental Appraisal project envelope (EMEC, 2014)	Max. of 20
Electrical hub parameters		
Total direct seabed coverage	Not present at site	Max. total area of 500 m ² per hub, with a maximum of eight installed
Distance above sea surface for surface-piercing electrical hub	Not stated in Environmental Appraisal project envelope (EMEC, 2014)	18 m (at MLWS), excluding navigational and communication equipment
<u>Mooring parameters</u>		

Total weight of mooring mechanism	Not stated in Environmental Appraisal (EMEC, 2014)	Max. of 4,000 tonnes per device
Total mooring footprint	Not stated in Environmental Appraisal (EMEC, 2014)	Max. total area of 0.1 km ² per array
Total direct seabed coverage	Not stated in Environmental Appraisal (EMEC, 2014)	Max. total area of 3,000 m ² per device
Foundation parameters		
Total weight of seabed attachment mechanism excluding foundation substructure	Not stated in Environmental Appraisal project envelope (EMEC, 2014)	Max. of 4,000 tonnes per device
Total direct seabed coverage	Not stated in Environmental Appraisal project envelope (EMEC, 2014)	Max. total area of 750 m ² per device
Foundation & mooring methods	Non-percussive drilling and gravity/ embedment-based anchor techniques	Non-percussive drilling and gravity/ embedment-based anchor techniques
Frequency of marine works per berth		
Pre-installation activities	Up to 1 week	Typical duration of up to 1 week
Installation activities	Up to 1 month	Typical duration of up to 1 month per device (max. of 7 days of drilling per device)
Inspection and maintenance activities	Likely to be visits at regular intervals, over 3-12 months.	At regular intervals over 3-12 months
Temporary retrieval and redeployment of nacelle, gravity foundations, anchors or scientific equipment	Up to 1 month	Typical duration of up to 1 month
Inspection, maintenance and replacement of cables and protection	Up to 1 week	Typical duration of up to 1 week
Simultaneous marine works		
Simultaneous noisy installation activities	Max. 2 berths	Max. 4 berths
Simultaneous inspection/maintenance activities	Max. 2 berths	Max. 4 berths
Number of vessels operating at site simultaneously	14	15
Testing of device components		
Deployment of temporary floating platforms	Not stated in Environmental Appraisal project envelope (EMEC, 2014).	Max. 5 on whole site at same time

NATURESCOT EIA SCOPING ADVICE FOR PROPOSED FALL OF WARNESS SECTION 36 CONSENT

APPENDIX B – HYDRODYNAMIC AND PHYSICAL PROCESSES

Hydrodynamic and physical processes are considered in Section 5 of the scoping report.

Baseline information

Little information has been provided regarding cable landfall method(s) at the EMEC facility on Eday. There is reference in section 5.2.2.1, page 31, to the “opportunity” to bury cables in sand-filled gullies between the nearshore bedrock ridges. More information needs to be provided on the cable landfall method(s) within the project envelope.

The only reference to future coastal change is in section 5.2.2.1, where it says that erosional retreat of the low cliffs is too slow “to present an issue over the lifetime of the project”. However, modelling published in 2021 by the Dynamic Coast 2 mapping project⁵ has now provided an important evidence base taking account of ongoing sea-level rise. This models retreat of Mean High Water Spring (MHWS) by up to 5 metres by 2050, accelerating to a total of up to 20 metres by 2100. Although these are projections not predictions, and cannot take account of specific local factors, they highlight that cables buried through the beach could be re-exposed by coastal retreat over the next few decades. In that scenario, there might be demand for (further) engineered protection of the cables. Robust planning for this eventuality would help adapt the overall project, including the EMEC onshore facility, to one of the key effects of climate change.

Effect pathways to be scoped in/out

Table 5.2 and 5.3, section 5.3, details the potential effects scoped in and out for device deployment and decommissioning and device operation and maintenance. In particular, table 5.3 highlights potential effects of cable protection in the nearshore and intertidal zone on distribution of erosion and sedimentation. We are broadly content with the impacts that are scoped in. However, based on the points above, we advise that the following additional effect pathway should be scoped in: potential interruption to erosion and deposition at the coastal edge and beach due to cable protection, whether at installation or in the future.

Protected sites

The text regarding the Wyre and Rousay Sounds NCMPS in Table 5.4, page 35, scopes out potential effects on this MPA due it being 5.5 km away from the proposal site’s western boundary. Although we agree that direct connectivity to the MPA is unlikely, its overlapping maerl and marine geomorphology features could be affected by changes to processes beyond the MPA boundary. Therefore, we advise that the Wyre and Rousay Sounds NCMPS should be fully considered in the assessment.

⁵ Dynamic Coast (2021) Available at: <https://www.dynamiccoast.com/> (Accessed: 16 August 2022)

Cumulative impacts

We are content with the approach to the cumulative impact assessment, as outlined in section 5.5.

Approach to assessment

Section 5.6, page 36, of the scoping report discusses the assessment of impacts arising from the project on hydrodynamic and physical receptors. It proposes to investigate these potential effects using spreadsheet-based analytical tools. Given the paucity of mobile sediment in the general area this is likely to be sufficient. However, there are uncertainties over the proposals due to the wide project design envelope, and therefore there are also uncertainties over the potential effects of the proposals on hydrodynamic and physical receptors. We therefore recommend that the need for modelling to inform the EIA should not yet be ruled out, and that NatureScot and Marine Scotland should be consulted on an interim physical processes method statement or initial findings report in advance of the application. A decision on the need for modelling can be made based on this report.

APPENDIX C – BENTHIC INTERESTS

Benthic interests are considered in section 6 of the scoping report.

Baseline information

We are content that table 6.1, section 6.2.1, captures the relevant baseline data sources.

We note the possibility of two Priority Marine Features (PMFs) being present in the subtidal area. ScotRenewables (2011)⁶ reported a possible record of some scattered maerl debris (*Lithothamnion corallioides* or *Phymatolithon calcareum*), which we assume was located at the eastern part of the site where the ScotRenewables device was deployed. Predictive modelling conducted by Thomson *et al.* (2014)⁷ indicates an area of high probability of seagrass (*Zostera spp.*) habitat in the nearshore area of part of the site, but no sampling was undertaken for confirmation. We therefore advise that if any infrastructure is installed or devices deployed within the locations where these PMFs could be present, then the assessment will need to consider impacts on these. This may require baseline characterisation surveys.

Effect pathways to be scoped in/out

The potential effects on benthic receptors from device deployment and decommissioning and device operation and maintenance are described in table 6.2 and table 6.3, respectively. We are content with the impact pathways scoped in and scoped out.

With regards to the potential introduction of marine invasive non-native species (MINNS), we note that EMEC has processes in place to manage the risk of introduction of MINNS. Since the Fall of Warness tidal site is proposed to substantially expand, we would advise that these procedures be updated accordingly.

Protected sites

Section 6.2.3 has correctly identified that the Fall of Warness site does not sit within or directly adjacent to any SACs, NCMPAs or SSSIs designated for the protection of benthic habitats or species. The closest protected site with benthic protected species is the Wyre and Sound NCMPA, which lies over 5.5 km west of the Fall of Warness site boundary. We agree with the conclusions drawn in table 6.4, section 6.4, that there is no connectivity with any SACs or SSSIs with benthic qualifying features. However, we do not agree that no NCMPAs with protected benthic features will be impacted. As we stated in Appendix B of this document, although direct connectivity to the Wyre and Rousay Sounds NCMPA is unlikely, its overlapping maerl and marine geomorphology features could be affected by changes to processes beyond the MPA boundary. Therefore, we advise that the Wyre and Rousay Sounds NCMPA should be fully considered in the assessment.

⁶ ScotRenewables. (2011). Seabed survey report: cable route and potential mooring locations at Fall of Warness test site. Issued by: Aquatera Ltd. p.353, September 2010-January 2011.

⁷ Thomson, M., Jackson, E. and Kakkonen, J. (2014). Seagrass (*Zostera*) beds in Orkney. Scottish Natural Heritage Commissioned Report No. 765.

Cumulative impacts

We are content with the approach to the cumulative impact assessment, as outlined in section 6.5.

Approach to assessment

We are generally content with the assessment methods described in section 6.6.

APPENDIX D – FISH AND SHELLFISH INTERESTS

Fish and shellfish are considered in section 7 of the scoping report.

Baseline information

Additional data sources which should be included in table 7.1, pages 46-47, are the Essential Fish Habitats maps to be published (August 2022) by the ScotMER fish and fisheries group.

Protected sites – diadromous interests

River Thurso and River Naver SACs are correctly cited within the scoping report in section 7.2.3, page 48, for inclusion. There may also be potential connectivity with other SACs for Atlantic salmon, even though they are further away. For example, Berriedale & Langwell SAC, Foinaven SAC and Little Gruinard River SAC. There are monitoring and tracking projects which could provide relevant information on the routes some Atlantic salmon use to and from these SACs. Particularly from the Atlantic Salmon Trust (Moray Firth⁸ and Laxford tracking projects). These findings should then be used to guide HRA for those SACs subsequently found to have connectivity.

Priority Marine Features

PMFs⁹ are identified within the scoping report as an appraisal mechanism in table 7.5, page 52. However, it is noted there is no discussion of PMFs within the baseline overview nor is it included within the Key Data Sources in Table 7.1.

In addition to being qualifying features of European sites, Atlantic salmon are PMFs along with European eel and sea trout. All three of these species are present in Orkney's waters and should be considered in the assessment with respect to their life history stages and potential impact routes.

European eel is a conservation priority due to a dramatic drop in its population over the last 20 years; it is listed as 'critically endangered' on the IUCN Red list. Very little is known about their migration pathways, either as juveniles or adults. A literature review from Marine Scotland Science (Malcolm *et al.*, 2010¹⁰) reviews the data available in relation to European eel migration routes and behaviour. A 2010 SNH literature review¹¹ considers the effects of noise and EMF on European eels.

⁸ Newton, M. Honkanen, H. Lothian, A. and Adams, C. (2019). The Moray Firth Tracking Project – Marine Migrations of Atlantic Salmon (*Salmo salar*) Smolts Proceedings of the 2019 SAMARCH Project: International Salmonid Coastal and Marine Telemetry Workshop pg 19-22. Available at: <https://atlanticsalmontrust.org/wp-content/uploads/2020/07/SAMARCH-Tracking-Conference-Nov-2019-final-1-2.pdf> (Accessed: 16 August 2022)

⁹ NatureScot (2020) Priority marine features in Scotland's seas. Available at: <https://www.nature.scot/professional-advice/protected-areas-and-species/priority-marine-features-scotlands-seas> (Accessed: 16 August 2022)

¹⁰ Malcolm I.A., Godfrey, J. and Youngson A.F. (2010). Review of migratory routes and behaviour of Atlantic salmon, sea trout and European eel in Scotland's coastal environment: implications for the development of marine renewables. *Scottish Marine and Freshwater Science*, 1(14).

¹¹ Gill, A.B. and Bartlett, M. (2010) Literature review on the potential effects of electromagnetic fields and subsea noise from marine renewable energy developments on Atlantic salmon, sea trout and European eel. Scottish Natural Heritage Commissioned Report No.401.

Sea trout are a UK Biodiversity Action Plan priority species. Sea trout support a number of fisheries in Scotland and many of these fisheries have undergone declines in the last 25 years. The 2010 report from Marine Scotland Science also reviews the data available in relation to sea trout migration routes and behaviour. SNH's 2010 report considers the effects of noise and EMF on sea trout.

We have considered other fish, such as European river and sea lamprey, sparling, and allis and twaite shad, and are content for these to be scoped out. Very little is known about the population sizes and migratory behaviour of these species, and, although there are anecdotal records of the presence of some of these species from the north coast of Scotland, it is thought that they do not occur in Orkney's waters.

Effect pathways to be scoped in/out

Barrier effect

We welcome the acknowledgement of the potential barrier effect of the larger development on diadromous fish (particularly Atlantic salmon and sea trout) migratory routes in table 7.4, page 50. The proposed collision modelling will be required to evaluate and assess this impact.

Noise and electromagnetic fields (EMF)

In general terms, we welcome that section 7.3 of the scoping report acknowledges the importance of assessing underwater noise for marine and diadromous fish and electromagnetic fields (EMF) for marine and diadromous fish and shellfish. Below we provide advice on further considerations on this topic.

With regards to diadromous fish, European eel and sea trout need to be given greater consideration as PMFs.

In contrast to Atlantic salmon, sea trout do not migrate rapidly out to sea and may linger in coastal areas longer (Malcolm *et al.*, 2010) therefore increasing the likelihood of prolonged exposure to noise. The findings of the assessment of potential impacts from sound pressure and particle movement will determine whether ceasing relevant noisy activities during the hours of darkness or at peak migration time could help to mitigate potential impacts from noise to both Atlantic salmon and sea trout.

The particle vibration component of sound is noted for marine shellfish. However, this also applies for fish and therefore should be considered. We are aware that this issue remains understudied, but a recent Good Practice Guide¹² may be useful.

We suggest that EMF for both buried cables and for cables that are floating/hanging in the water column needs to be considered, as the EMF intensity between them is likely to be different.

Due to the naval history of the area the potential requirement for unexploded ordnance (UXO) clearance during installation, and its effects, should be identified for consideration within the assessment.

Sediment

Whilst we agree that increased suspended sediment/turbidity (including release of drill cuttings) can be scoped out as not important for diadromous fish during deployment (table 7.3, page 49), once operational (table 7.4, page 50) there is the potential for longer term changes to the sediment and hydrodynamic regime from the subsurface and seabed devices. This has the potential to impact upon diadromous fish. Therefore, changes to the sediment and hydrodynamic regime during operation should be considered as potentially important for diadromous fish.

The scoping report has focused on adult fish, which is appropriate for most fish as eggs/larvae are pelagic. However, herring and sandeels lay their eggs on the seabed and should be considered separately – due to the likelihood of suitable habitat in proximity of the proposed site, especially for smothering from suspended sediments and drill cuttings.

Cumulative impacts

We are content with the approach to the cumulative impact assessment, as outlined in section 7.5.

Approach to assessment

The desk-based review suggested for the noise assessment in section 7.6, page 54, should be sufficient for both deployment and decommissioning, for which the relevant impact pathway is drilling and disturbance from vessel activity/presence, for which there are relevant literature available. The assessment will need to be clear as to the level of installation activity, including likely duration of any simultaneous or sequential drilling.

The scoping report suggests that a noise assessment for the operational and maintenance phase will be assessed by a desk based review. The project envelope includes a wide range of tidal device types, and there is currently limited information regarding the sound characteristics of most devices. It may therefore be difficult to undertake this task solely by reviewing the literature.

¹² Nedelec, S.L., Ainslie, M.A., Andersson, M.H., Cheong S-H., Halvorsen, M.B., Linné, M., Martin, B., Nöjd, A., Robinson, S., Simpson, S.D., Wang, L. and Ward, J. (2021) Best Practice Guide for Underwater Particle Motion Measurement for Biological Applications. Exeter, UK, University of Exeter for the IOGP Marine Sound and Life Joint Industry Programme, 89pp. Available at: <https://repository.oceanbestpractices.org/handle/11329/1884> (Accessed 16 August 2022)

There may be some modelling required for operational noise. For example, the assessment should consider the worst case scenario of 35 simultaneous devices operating in the area and what this may mean cumulatively for the soundscape of the Fall of Warness (i.e. consider the entire Fall of Warness as the array). This assessment is likely to need modelling. As with the installation assessment, this should consider the possibility of whether the operational noise could result in displacement/avoidance of the area. Useful references are provided in the footnote below¹³.

Collision risk modelling was discussed with EMEC at a recent meeting on the 5th July 2022. We will continue to work with EMEC as they work through the detailed assessment.

¹³ Risch, D., van Geel, N., Gillespie, D., and Wilson, B. (2020). Characterisation of underwater operational sound of a tidal stream turbine, *J. Acoust. Soc. Am* 147 (4). Available at: https://www.academia.edu/48758761/Characterisation_of_underwater_operational_sound_of_a_tidal_stream_turbine (Accessed: 16 August 2022)

Robinson, S. and Lepper, P. (2013). Scoping Study: Review of Current Knowledge of Underwater Noise Emissions from Wave and Tidal Stream Energy Devices. Report by Loughborough University for The Crown Estate. Available at: <https://tethys.pnnl.gov/publications/scoping-study-review-current-knowledge-underwater-noise-emissions-wave-tidal-stream> (Accessed: 16 August 2022)

APPENDIX E – ORNITHOLOGY INTERESTS

Ornithology interests are considered in section 8 of the scoping report.

Key NatureScot advice

- Movements of vessels between the test site and base ports/harbours or temporary anchorage areas should be scoped into both the EIA and HRA.
- New baseline ornithology surveys at the test site are required to inform robust impact assessments for both EIA and HRA. Additional surveys may also be required to support assessment of impacts associated with vessel movements but insufficient information is provided to enable us to determine requirements at this stage.
- Cormorant, black guillemot and gannet should be added to the priority species list for the test site.
- Initial screening of seabird colonies and red-throated diver breeding sites for both EIA and HRA should be based on foraging ranges, as further detailed below.
- We would anticipate that evidence derived from post-consent monitoring of tidal deployments to date at Fall of Warness and other lease sites should help inform EIA and HRA.

Baseline information

Data sources

In table 8.1, it is proposed that the main data sources that would be used to characterise the at-sea abundance and distribution of marine birds within the test site are the EMEC Wildlife Observation Programme and the Westray South tidal array surveys. As recognised in the second paragraph of section 8.2.1, page 55, these survey data are now a minimum of 8 years old, which is well beyond the 5 year cut off we would normally apply. There is no reference to any other post-consent monitoring surveys relating to the deployments at the site to date.

As is recognised in section 8.2.2 in the third full paragraph on page 57, national monitoring schemes, including the UK Seabird Monitoring Programme¹⁴ and Wetland Birds Survey (WeBS)¹⁵ indicate rapid and substantial changes in regional and or national populations of some marine birds over the past decade.

The suggestion that the Seabird Count census data might be used to adjust abundance estimates at the test site has several weaknesses:

¹⁴ JNCC (2021) Seabird Monitoring Programme Report 1986–2019. Available at: <https://jncc.gov.uk/our-work/smp-report-1986-2019/> (Accessed: 16 August 2022).

¹⁵ Frost, T.M., Calbrade, N.A., Birtles, G.A., Hall, C., Robinson, A.E., Wotton, S.R., Balmer, D.E. and Austin, G.E. (2021). Waterbirds in the UK 2019/20: The Wetland Bird Survey. BTO, RSPB and JNCC, in association with WWT. British Trust for Ornithology, Thetford. Available at: <https://www.bto.org/sites/default/files/publications/wituk1920forweb.pdf> (Accessed: 16 August 2022)

- The census only covers breeding “true” seabirds and does not include other types of marine bird that may use the site (e.g. eider and other resident or migratory seaducks, breeding red-throated divers, wintering divers and other migratory species).
- Seabird Count data could potentially (but please see next bullet point) be used to inform apportioning of impacts among colonies and also PVA, should assessments of collision risk indicate potential for significant impacts at SPA colony or regional population levels. However, in absence of associated tracking data, there is insufficient evidence to link changes in breeding populations at given colonies with potential changes to likely densities of birds utilising the test site area.
- The current unprecedented Highly Pathogenic Avian Influenza (HPAI) epidemic is impacting many species of breeding seabirds, including diving species such as gannets and auks. There have also been some deaths of eider and other waterbirds. The effects on future populations have yet to be determined. However, given the scale of adult mortality being witnessed, it is anticipated that populations of some species, locally, regionally and nationally, will be severely depressed for many years to come. Unfortunately this means that for many species the data collected over the past few summers for the national Seabirds Count will not be valid. Similarly, there may be major disruptions to trends derived from regular monitoring of sample colonies under the UK Seabird Monitoring Programme. NatureScot and Marine Scotland are working through the implications of HPAI for seabird populations, and how this will impact our considerations of anthropogenic impacts and their assessment as well as ongoing monitoring/surveillance requirements. We will keep developers informed, but it is too early to provide any further clarity at this stage.

For all of the above reasons, and given the scale of proposed increase in generating capacity and associated numbers of cables and devices that may operate at the test site, we advise that new baseline ornithology surveys are required to inform robust impact assessments. The existing survey data (see above and also comments below on Table 8.2), together with relevant data on bird densities and/or behavioural responses to turbines derived from post consent monitoring of deployments at the test site, could legitimately be used to inform the design of such surveys. Noting some of the challenges associated with the original Fall of Warness survey datasets, we would welcome further discussions with EMEC on this to ensure that any data collected are fit for purpose.

The sources identified in Table 8.1 to provide regional context are relevant (noting caveats above with respect to HPAI impacts).

Please also see our comments below for section 8.6 regarding use of some of these data sources for assessment of possible disturbance impacts associated with vessel movements transiting to the test site.

Priority species

We do not have access to the Westray South tidal array survey data, but we have reviewed table 8.2 in section 8.2.2 against the summary of EMEC's Fall of Warness data to 2010 (Robbins, 2012¹⁶) and EMEC's summary report to April 2012 (EMEC 2012¹⁷). In general, table 8.2 appears to be a reasonable qualitative summary of the ornithological characteristics of the Fall of Warness test site at that time (but see comment below on cormorant). However, it would be helpful to have included a clear definition of what is meant by the terms used to describe numbers (scarce, very common, likely absent, uncommon, etc.) and preferably also a quantitative summary of estimated (mean and/or peak seasonal numbers) previously recorded at the test site.

In section 8.2.2 on pages 57 and 58, it is suggested that priority species are common guillemot, razorbill, European shag, common eider, red-throated diver, great northern diver and European storm petrel. We would support inclusion of these species, with some additions, as follows:

- *Cormorant*: there is no mention of cormorant in either table 8.2 or the associated text, despite multiple observations at the site (Robbins, 2012). Orkney holds c.11% Scottish and 6% GB populations (Mitchell et al, 2004¹⁸) including an SPA colony at Calf of Eday and an undesignated colony at Little Green Holm immediately adjacent to the test site. Please also see our comments on section 8.3 (below).
- *Black guillemot*: black guillemot commonly occurs at the site throughout the year and the Orkney breeding population represents c.15% of the GB total (Mitchell et al, 2004).
- *Gannet*: device rotors may be at depths from just 2.5m below sea surface which is well within diving depth for this species. There is also now added importance to assessing potential additional population stressors for gannet given evidence of very high susceptibility to HPAI impacts. Please also see our comments on section 8.3 (below).

Protected sites

Connectivity to protected sites is discussed in section 8.2.3, page 60-63.

The proposed approach to HRA screening is not appropriate, in particular:

- The restriction of consideration of colony SPAs only to those within 100km of the test site (page 61, second full paragraph).
- The proposed adoption of High, Moderate, Low and None categories of "theoretical potential connectivity" (page 61 and table 8.3) with only those SPA features categorised as Moderate or High screened in (page 61, first full paragraph).

Foraging ranges of breeding seabirds (here including red-throated divers) should be used to produce a long list of SPA qualifying seabirds with connectivity to the Fall of Warness test site. This long list may subsequently be refined as updated baseline information is collected and also

¹⁶ Robbins, A. (2012). Analysis of Bird and Marine Mammal Data for Fall of Warness Tidal Test Site, Orkney. Scottish Natural Heritage Commissioned Report No. 614. Available at: <https://www.nature.scot/doc/naturescot-commissioned-report-614-analysis-bird-and-marine-mammal-data-fall-warness-tidal-test-site> (Accessed: 16 August 2022)

¹⁷ EMEC. (2012). EMEC Fall of Warness Tidal Test Site: Wildlife Observations Project Final Report April 2012

¹⁸ Mitchell, P.I., Newton, S.F., Ratcliffe, N. and Dunn, T.E. (2004). Seabird Populations of Britain and Ireland, JNCC, Peterborough, ISBN 0 7136 6901 2

considering information on impact pathways and species sensitivities. This method may also be used to assess connectivity to other protected seabird colonies, such as Sites of Special Scientific Interest (SSSIs) (e.g. in this instance the Mill Loch SSSI for breeding red-throated divers on Eday) and for regionally important colonies (e.g. the cormorant colony on Little Green Holm) for wider EIA assessment.

The recommended metric for establishing connectivity is the mean max + 1SD foraging ranges in Woodward et al (2019)¹⁹. There are some minor caveats to this, as detailed further below. Actual distance to SPAs becomes relevant at a later point in the HRA process when apportioning predicted impacts on given species among colonies.

Unlike the breeding seabird features of seabird colony SPAs, wintering waterfowl features (various divers, grebes, seaducks and shags) are essentially presumed to be resident within the site boundary. Hence, these features of marine SPAs do not generally have connectivity to developments/activities operating outwith the SPA boundary, unless there is some impact pathway arising from the development that could affect the conservation objectives within the SPA. In this instance there will be connectivity between the Fall of Warness test site and the North Orkney SPA associated with passage of vessels operating at the site through the SPA from Kirkwall/Hatston and there could also be connectivity to the Scapa Flow SPA if other ports such as Stromness are used by these vessels. Any increase in passage of vessels between the test site and any temporary anchorage areas will also require consideration. (See also comments below on section 8.3).

Breeding red-throated divers nest at freshwater lochs or lochans, but feed at sea. They are a feature of both Scapa Flow and North Orkney SPAs and at risk of disturbance or displacement from key foraging area as a consequence of novel or increased vessel movements through these sites. The majority of red-throated divers foraging within the two Orkney marine SPAs are also features of either the Hoy or Orkney Mainland Moors terrestrial SPAs, with the latter also having direct connectivity to the Fall of Warness test site.

In this instance the nearest ncMPA with bird interest features (black guillemot) is at Papa Westray and we would not anticipate any of the proposed activities impacting this MPA. This comment is also relevant to Table 8.6, page 67.

Effect pathways to be scoped in/out

We agree with the high level impact pathways listed in section 8.3, page 63. We note that repeated disturbance by vessels (as well as presence of devices) may also ultimately result in permanent displacement of birds from impacted locations.

Tables 8.4 and 8.5 in section 8.3 consider the potential importance of the main effect pathways for particular bird species or species groups at the deployment/decommissioning and

¹⁹ 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, Report of work carried out by the British Trust for Ornithology on behalf of NIRAS and The Crown Estate, ISBN 978-1-912642-12-0.

operational/maintenance phases. In general, we support the conclusions reached, but, as discussed above, it is important that disturbance/displacement impacts outwith the test site that may be associated with vessel movements to and from the site are included in assessments. The predicted routes and frequency of such vessel movements under the various scenarios being developed for the EIA should be detailed and assessed within the EIA Report. Depending on locations of base ports and any temporary anchorage areas, it is anticipated that a particular focus should be on potential for disturbance of wintering waterfowl or breeding red-throated diver features of the North Orkney and/or Scapa Flow SPAs. There are some more recent information sources with respect to behavioural sensitivities to disturbance that are not considered in the scoping report (Goodship and Furness, 2019²⁰; Jarrett *et al.*, 2018²¹).

The following are a few specific points regarding potential effects we would like to raise:

- *Disturbance*: Slavonian grebes and red-breasted mergansers should be included in the grouping of species for which disturbance associated with vessel traffic is potentially important.
- *Seabed habitat loss*: no quantitative information has been provided to support the conclusion that device footprints will be negligible; more details of this specific to the various scenarios being developed should be included in the Environment Report
- *Collision with tidal device*: it is unclear why this has been limited to species foraging more than 5m below sea surface when minimum rotor tip clearance is 2.5m. We note that gannet and “cormorant species” (presumably meaning both European shag and cormorant) are correctly included in the list of species vulnerable to collision risk. Please see our earlier comments on priority species.
- *Displacement from fixed structures*: it is unclear why other species diving to depth (and identified as at risk of collision), in particular seaducks, shags and cormorants, are not also included here. Should there be relevant evidence to support this (e.g. derived from post-consent monitoring at Fall of Warress, or other tidal deployments), this should be detailed in the Environment Report.

These and previous comments also apply to Table 8.7 in Section 8.6.

Cumulative impacts

The list of indicative developments for inclusion in cumulative/in-combination assessment in table 4.2 in section 4.2.5 appears relevant to consideration of ornithological impacts. Existing shipping activities can be considered part of the baseline as stated in section 8.5. However, as per the comments above, in particular with respect to the North Orkney and/or Scapa Flow SPAs, novel or

²⁰ Goodship, N. and Furness, R.W. (2019). Seaweed hand-harvesting: literature review of disturbance distances and vulnerabilities of marine and coastal birds. Scottish Natural Heritage Research Report No. 1096. Available at: <https://www.nature.scot/doc/naturescot-research-report-1096-seaweed-hand-harvesting-literature-review-disturbance-distances-and> (Accessed: 16 August 2022)

²¹ Jarrett, D. et al (2018) Short-Term Behavioural Responses of Wintering Waterbirds to Marine Activity: Quantifying the Sensitivity of Waterbird Species during the Non-Breeding Season to Marine Activities in Orkney and the Western Isles. *Scottish Marine and Freshwater Science*, 7(9), pp. 88. Available at: <https://data.marine.gov.scot/dataset/short-term-behavioural-responses-wintering-waterbirds-marine-activity-quantifying> (Accessed: 16 August 2022)

increased vessel movements associated with these developments should be considered in combination with those arising from this proposal.

Approach to assessment

Under Displacement and Disturbance on page 69, it is stated that the number of birds potentially affected will be estimated from mean and peak seasonal densities recorded at the test site and similar comments are made with respect to collision risk assessment. However, as discussed above under section 8.2, we do not have recent data to inform these density estimates.

Note also that assessment of disturbance/displacement of birds along associated vessel routes may also be required. Depending on details of these vessel movements this could require additional bespoke surveys outwith the test site, particularly within the North Orkney and/or Scapa Flow SPAs. However, there are also some existing data sources (Upton *et al.*, 2018²²; Jackson, 2018²³) that may be relevant. We cannot advise further on this aspect without seeing more details of likely vessels routes and frequency of movements.

We are already engaged in more detailed discussions with the consultants with respect to their proposed approach to collision risk modelling and the development of associated scenarios. The EIA should include consideration of any evidence on avoidance behaviours derived from post-consent monitoring of deployments to date at Fall of Warness and other tidal lease sites.

²² Upton, A.G., Williams, S.J. and Williams, E.J. (2018) North Orkney proposed Special Protection Area (pSPA) – inshore wintering waterfowl survey 2017/18. Scottish natural Heritage Research Report No. 1074.

²³ Jackson, D. (2018) Scapa Flow proposed Special Protection Area (pSPA) – inshore wintering waterfowl surveys 2017/18. Scottish natural Heritage Research Report No. 1075.

Guidance on assessing connectivity to seabird colony SPAs for HRA screening

We advise mean max + 1SD as given in Woodward *et al.* (2019) should be used to screen in connectivity to SPAs with the following exceptions:

1. **For gannet** we recommend using mean max +1SD for all colonies without site specific maximum values. However, for the SPA colonies where site specific evidence exceeds this value (509.4km), namely: Forth Islands (Bass Rock); Grassholm; and St Kilda the site specific maximum should also be used (see table, below).
2. Tracking on Fair Isle showed foraging distances are greater than those of all other colonies, for both **common guillemot and razorbill**. This may relate to poor prey availability during the study. However, trends for seabirds in the Northern Isles indicate this may be becoming a more frequent occurrence. We therefore recommend for common guillemot and razorbill:
 - Use of mean max+1SD, including data from Fair Isle for all Northern Isles designated sites (see table below).
 - For all designated sites south of the Pentland Firth (i.e. excluding the Northern Isles, use of mean max +1SD discounting Fair Isle values (as given in Woodward *et al.*, 2019).
3. For species with insufficient data to calculate mean max +1SD then the closest metric is to be used in the following order of preference:
 - Mean Max (MM)
 - Max
 - Mean

Exceptions to recommended foraging ranges in Woodward *et al.* (2019)

Species	Exception Applied	Recommended Foraging Range (km)	Metric
Northern gannet	Forth Islands SPA	590	Max
	Grassholm SPA	516.7	Max
	St Kilda SPA	709	Max
Common guillemot	All Northern Isle SPAs	153.7	MM+SD
Razorbill	All Northern Isle SPAs	164.6	MM+SD

APPENDIX F – MARINE MAMMAL & BASKING SHARK INTERESTS

Marine mammal interests are considered in sections 10 and 11 and basking sharks are considered in section 9 of the scoping report.

Baseline information

We are content that table 9.1 (section 9.2.1), table 10.1 (section 10.2.1) and table 11.1 (section 11.2.1) captures the relevant baseline data sources for basking sharks, cetaceans and seals.

Protected sites

Moray Firth SAC - Bottlenose dolphin

We note that there appears to be a contradiction in the text within section 10.2.3.1, paragraph 2, page 79. It states that: *“The Fall of Warness site lies within the Greater North Sea MU and it is unlikely that any bottlenose dolphin encountered there would be of the wide-ranging offshore ecotype. Consequently, there is not expected to be any connectivity between the Fall of Warness site and the Moray Firth SAC with respect to bottlenose dolphin.”* We believe this should say “likely” instead of “unlikely”.

We agree that bottlenose dolphins are more likely to be of the offshore population.

Nature Conservation Marine Protected Areas (NCMPAs)

We would like to highlight that for NCMPAs, the features (e.g. minke whale feature of the Southern Trench MPA) are protected largely within or in close proximity to the site boundary. Therefore, there is no connectivity issues (at the large distances described) as there could be with SACs.

Sanday SAC

The connectivity of Sanday SAC with the Fall of Warness tidal site is discussed in section 11.2.3.1, pages 87-88. Sanday SAC is located approximately 15 km from the Fall of Warness tidal site and the tidal site is well within the foraging range of harbour seals from haul-outs. Thus, it is likely that some of the seals from this SAC use the Fall of Warness tidal site for foraging and/or transit. We disagree with the report conclusions which state: *“this distance, plus the presence of other (albeit smaller) harbour seal haul-outs in the vicinity of the Fall of Warness site and wider Orkney area, make it highly likely that a large proportion of the harbour seals present are not associated with the Sanday SAC. Also, there is a good availability of quality foraging habitat near Sanday that makes it unlikely that the Fall of Warness site is important in this regard.”* There is no evidence to support these assumptions. Tagging data from Sanday has shown that seals tagged on Sanday may

forage further afield^{24 25}. Therefore, we advise that the connectivity between the Fall of Warness tidal site and Sanday SAC with respect to harbour seals should be scoped in for further consideration.

Effect pathways to be scoped in/out

Entanglement in lines or cabling leading to injury or death

Whilst we agree that the potential impact of entanglement from mooring lines or cables during the operational phase is very low, as detailed in table 9.3 and 10.3, we advise that consideration should be given to entanglement of marine mammals and basking sharks from ghost fishing gear that may become caught on devices.

Presence of tidal device(s) and associated infrastructure leading to barrier effects

Table 10.3 of the report concludes potential barrier effects on cetaceans caused by the tidal devices is “*Not important ... Given the limited number and location of devices in the Project Envelope, there will be plenty of space available for animals to move through and no barrier effects*”. Table 9.3 of the report also concludes potential barrier effects on basking sharks caused by the tidal devices is “*not important*”. We disagree with these statements. Currently there has been no/limited studies of how any animals (cetaceans, seals or basking sharks) react to arrays, let alone a number of differing devices. Table 11.3 states that potential barrier effects on grey seal and harbour seal is “*not important*”. We need to take into account the designated seal haulouts within the development area and how seals currently using those haulouts may react. Having up to 35 devices on site at any one time is a substantial increase compared to any of the monitored tidal sites elsewhere. Therefore potential barrier effects caused by the tidal devices and associated infrastructure should be scoped in for further consideration for cetaceans, seals and basking sharks.

Vessel movements

Given the increase in number of vessels (which will be capped at 15) and the presence of designated seal haulout sites, consideration should be given to the development of a vessel management plan.

EPS and basking shark licence

We agree an EPS licence and a basking shark licence is likely to be required to cover disturbance.

Cumulative impacts

We are content with the approach to the cumulative impact assessment, as outlined in sections 9.5, 10.5 and 11.5.

²⁴ 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. Available at: <https://data.marine.gov.scot/dataset/regional-baselines-marine-mammal-knowledge-across-north-sea-and-atlantic-areas-scottish> (Accessed: 16 August 2022) (see figure 5, page 27, for an amalgamation of all the harbour seal tagging).

²⁵ SMRU Ltd (2011). Utilisation of space by grey and harbour seals in the Pentland Firth and Orkney waters. Scottish Natural Heritage Commissioned Report No. 441, pp. 29 - 30. Available at: https://tethys.pnnl.gov/sites/default/files/publications/SMRU_Ltd_2011.pdf (Accessed: 16 August 2022)

Approach to assessment

Collision risk assessment

We are already engaged in more detailed discussions with EMEC and their consultants with respect to their proposed approach to collision risk modelling and the development of associated scenarios. The EIA should include consideration of any evidence on avoidance behaviours derived from post-consent monitoring of deployments to date at Fall of Warness and other tidal lease sites.

Noise assessment – installation (deployment & decommissioning)

The desk-based review suggested for the noise assessment in sections 9.6, 10.6 and 11.6 should be sufficient for both deployment and decommissioning, for which the relevant impact pathway is drilling and disturbance from vessel activity/presence, for which there are relevant literature available. The assessment will need to be clear as to the level of installation activity, including likely duration of any simultaneous or sequential drilling.

With specific regards to cetaceans, drilling is non-impulsive and so although this reduces the risk of instantaneous auditory injury, it is continuous in nature. Therefore, depending on the noise levels and duration, there may be a risk of accumulated Permanent Threshold Shift (PTS) which will need to be addressed in the assessment. Drilling is likely to be a disturbance risk. We would expect the assessment to look at:

- The worst case scenario of the maximum number of devices installed at the same time and the resulting disturbance.
- The cumulative impact of the sequential installation of devices and what that might mean for the Fall of Warness area (i.e. whether there is a risk of displacement from the area).

Noise assessment – operation and maintenance

The scoping report suggests that a noise assessment for the operational and maintenance phase will be assessed by a desk based review. The project envelope includes a wide range of tidal device types, and there is currently limited information regarding the sound characteristics of most devices. It may therefore be difficult to undertake this task solely by reviewing the literature. There may be some modelling required for operational noise. For example, the assessment should consider the worst case scenario of 35 simultaneous devices operating in the area and what this may mean cumulatively for the soundscape of the Fall of Warness (i.e. consider the entire Fall of Warness as the array). This assessment is likely to need modelling. As with the installation assessment, this should consider the possibility of whether the operational noise could result in displacement/avoidance of the area. Useful references are provided in the footnote below²⁶.

²⁶ Risch, D., van Geel, N., Gillespie, D., and Wilson, B. (2020). Characterisation of underwater operational sound of a tidal stream turbine, *J. Acoust. Soc. Am* 147 (4). Available at: https://www.academia.edu/48758761/Characterisation_of_underwater_operational_sound_of_a_tidal_stream_turbine (Accessed: 16 August 2022)

Robinson, S. and Lepper, P. (2013). Scoping Study: Review of Current Knowledge of Underwater Noise Emissions from Wave and Tidal Stream Energy Devices. Report by Loughborough University for The Crown Estate. Available at: <https://tethys.pnnl.gov/publications/scoping-study-review-current-knowledge-underwater-noise-emissions-wave-tidal-stream> (Accessed: 16 August 2022)

APPENDIX G – OTTERS

Otters are considered in section 12 of the scoping report.

Overall, we advise that the risk of the proposed extension and expansion of the EMEC Fall of Warness tidal site to otters is low. The turbines themselves will be sited in fast-flowing tidal water at least 2.5m below the water surface. This is not preferred otter foraging habitat; their use of coastal waters is usually focussed on inshore relatively shallow and sheltered areas with abundant rocky islets/skerries, etc.

Baseline information

We are generally content with the information included in the Baseline Overview (section 12.2, pages 93-94). The key point to note about otter abundance and distribution in Orkney is that their use of coastal habitats and inshore waters is considerably less than in Shetland or the Hebrides and west coast mainland. This is thought to be due to land use and geology – the porous geology and predominately agricultural landscape does not provide the same abundance of freshwater pools, lochans, etc. that you see in Shetland and the west coast. This is thought to restrict how otters use Orkney's coastal waters because there is less availability of freshwater to wash the salt from their fur. Despite this, otters do use coastal waters in Orkney and so otters do need to be considered in the assessment.

Protected sites

The only European site for which otter is a qualifying interest in Orkney is the (freshwater) Loch of Isbister SAC. Section 12.2.3, page 94, states that the Loch of Isbister SAC is located on Eday, however it is located on Orkney Mainland, approximately 29km away. This section of the report also states that otters are a feature of Switha SSSI and Northwall SSSI. However, otters are not a feature of these SSSIs. There are no other designated sites with qualifying otter interest in the vicinity.

Effect pathways to be scoped in/out

We acknowledge that the project envelope (section 3.4, page 18-19) of the scoping report does not include any potential onshore works (above MHWS), which would require consideration under the Town and Country Planning (Scotland) Act 1997, but that it does include installation, maintenance and testing of subsea cables. If land-based infrastructure is required then there is likely to be potential impacts on otter, such as habitat loss or disturbance, if protected otter shelters are located nearby. This would need to be considered in the onshore EIA.

Any nearshore/intertidal cabling works could also have potential impacts on otters if otters use the area for foraging (otters forage within a 10m depth contour) or if there are nearby protected otter shelters. Therefore, we advise that the potential effects on otters from the installation of cables should be scoped into the EIA.

Appropriate otter surveys to identify otter use of the area as well as appropriate mitigation will be required. Further information can be found in NatureScot's standing advice for planning consultations²⁷.

We broadly agree with the assessment of potential underwater noise effects on otters, although our understanding of otter hearing underwater is incomplete. The key point is that their hearing is more adapted to terrestrial living so unlike cetaceans, we wouldn't expect them to be significantly affected by sub-marine noise.

Cumulative impacts

We are content with the approach to the cumulative impact assessment, as outlined in section 12.5.

²⁷ NatureScot (2020) *Standing advice for planning consultations – Otters*. Available at: <https://www.nature.scot/doc/standing-advice-planning-consultations-otters> (Accessed: 16 August 2022)

APPENDIX H – SEASCAPE, COASTAL CHARACTER AND VISUAL AMENITY

Seascape, coastal character and visual amenity are considered in section 14 of the scoping report.

Baseline information

We are content with the definition of the study area as illustrated in figure 14.1, section 14.2. We are also content that table 14.1 (section 14.2) encompasses the relevant baseline data sources.

Protected landscapes

The existing EMEC Fall of Warness site and proposed increase in berths sits seawards (west) of Eday. The site does not sit within the adjacent waters of a National Scenic Area (NSA) or to a Wild Land Area (WLA). As such, it does not raise significant effects of National Interest to NatureScot. Therefore, in this context, our advice is limited.

Viewpoints

Figure 14.2 in section 14.2.4 lists the potential viewpoints that represent the visual receptors. We advise that consideration is given to including a viewpoint from the south at Ness of Ork, Shapinsay, looking north towards the site.

Effect pathways to be scoped in/out

We are generally content with the impacts proposed to be scoped in for seascape, landscape and visual receptors as per table 14.3, section 14.3.

The effect of view of lighting on visual amenity experienced at night is highlighted within section 14.3. Depending on what lighting is proposed, a night-time photomontage may be required from one of the closer viewpoints, depending on lighting requirements. If possible, consideration could be given to minimise lighting and this could be investigated further as part of the test facility. For example, could the site marker buoys be lit rather than every individual component?

Cumulative impacts

We are content with the approach to the cumulative impact assessment, as outlined in section 14.5.

Approach to assessment

We are broadly content with the SLVIA assessment approach outlined in section 14.

‘Indicative visualisations’ are proposed in section 14.6.1, page 107. However, there is limited information as to their form and content. For example, will full photomontages be produced, and if so what components or combination of components/structures will they include? Will photo wirelines or just wirelines be produced? Will the colours of surface piercing components be defined by navigational requirements, or is there any flexibility to consider this aspect as part of the site being a test facility?

Northern Lighthouse Board



Northern Lighthouse Board

84 George Street
Edinburgh EH2 3DA

Tel: 0131 473 3100
Fax: 0131 220 2093

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

Your Ref: EMEC – S36 Scoping Report
Our Ref: AL/OPS/ML/E1_01_109

Ms Emma Lees
Marine Licensing Casework Officer
Marine Scotland – Marine Planning and Policy
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

16 June 2022

Dear Ms Lees

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

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

Request for Scoping Opinion for Proposed Section 36 Application for the Fall of Warness Tidal Test Site, European Marine Energy Centre, Orkney

Thank you for your e-mail correspondence dated 14th June 2022 relating to the Scoping Report submitted by European Marine Energy Centre (EMEC) relating to the proposed extension and expansion of the existing Section 36 consent for the Fall of Warness (FoW) site to allow a project duration to 2040 (in line with the site lease) and a site generating capacity up to 50 MW.

Northern Lighthouse Board have engaged with the applicant with regard to navigational safety across the FoW site, and are satisfied that this topic is discussed within the separate Navigational Risk Assessment (NRA) document, which is reviewed on a regular basis given the frequent changes of devices at the site.

NLB also note that cumulative effects of nearby projects will be scoped into the Environmental Impact Assessment.

NLB respects your privacy and is committed to protecting your personal data.
To find out more, please see our Privacy Notice at www.nlb.org.uk/legal-notices/

Northern Lighthouse Board have no objections to the content of this Scoping Report.

Yours sincerely

Peter Douglas
Navigation Manager

Orkney Islands Council

22/219/MARSCO Fall of Warness tidal site

European Marine Energy Centre - Consultation on Request for Scoping Opinion

Note: Any comments in relation to cumulative impacts on navigation etc should be sought from Orkney Harbour Authority directly.

The comprehensive Scoping Report outlines the key issues to be addressed in the EIAR; the cumulative impacts in particular will be a key issue for the EIAR.

The cumulative impacts of the existing site and the modifications proposed, e.g. more devices/infrastructure, more servicing etc, could have a likely significant effect on the qualifying features of the North Orkney SPA; SNH should advise regarding compliance with the National Marine Plan, in particular policies GEN 9 and 21.

The pilot PFOW MSP¹ highlights the area to be a 'hotspot' for common and harbour seal density. The cumulative impacts of the existing site, and the modifications proposed e.g. more devices/infrastructure, more servicing etc, on harbour seal populations, including those of the Sanday SAC, and the nearby seal haul outs and breeding colony seal haul out for both species should be carefully considered; SNH should advise regarding compliance with the National Marine Plan, in particular policies GEN 9 and 21.

The benthic data for the site currently appears to be largely based on a 2005 survey, but predictive modelling in 2014 "indicates an area of high probability of seagrass (*Zostera*) habitat in the nearshore area of part of the site, but no sampling was undertaken there as part of the study". In addition, "some scattered maerl debris (*Lithothamnion corallioides* or *Phymatolithon calcareum*) (ScotRenewables, 2011), there have been no records of any benthic species listed as Priority Marine Features (PMF, NatureScot, 2014; Tyler-Walters et al., 2016) on either the rocky or sandy substrates at the Fall of Warness site and " Although no formal biotope classification has been completed for the site, this habitat may represent the PMF 'Kelp beds – *Laminaria hyperborea* with dense foliose red seaweeds on exposed infralittoral rock', or a component of the PMF 'Tide-swept algal communities' (NatureScot, 2014; Tyler-Walters et al., 2016). However, the NMPi maps (Marine Scotland, 2022) do not indicate the presence of these or any other PMFs within the Fall of Warness site. This suggests there may be a lack of up to date information on the status of the benthic environment; SNH should advise if further survey is necessary to determine likely impacts on PMFs etc to inform the EIAR and ensure compliance with NMP Policies GEN 9 and 21.

¹ [Pilot Pentland Firth and Orkney Waters Marine Spatial Plan - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/pilot-pentland-firth-and-orkney-waters-marine-spatial-plan/pages/22-219-marSCO-fall-of-warness-tidal-site)

Orkney Marinas

From: [Orkney Marinas](#)
To: [MS Marine Renewables](#)
Subject: Re: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 14 July 2022
Date: 17 June 2022 08:46:09

Hello Emma,

We have no concerns about this.

Kind regards

Leesa

The Royal Society for the Protection of Birds (Scotland)



MS-LOT
Marine Scotland
By email: MS.MarineRenewables@gov.scot

22 July 2022

Dear Ms Lees,

Consultation on Request for Scoping Opinion - Falls of Warness Tidal Test Site, Orkney

Thank you for consulting RSPB Scotland on the scoping opinion for a proposed Section 36 application for the fall of Warness, Tidal Test Site, Orkney and the for the extension of time.

We understand the proposed development relates to changes to the existing Fall of Warness tidal testing site (part of the European Marine Energy Centre). This is located southeast of the island of Eday and has been operating since 2005. We further understand the development would seek to extend the duration of the project to 2040 and expand the site generating capacity to 50MW. The exact parameters of the project cannot however be provided as the test site is utilised for various turbines at any one time. To overcome this issue, the scoping opinion is based on worst-case scenarios from the project envelope. We understand this rational and the design envelope approach but encourage the developer to minimise the range of parameters as far as possible and omit unrealistic options early. We also wish to highlight the need to include cumulative and in-combination impacts as part of the assessment.

It is recognised within the scoping report that the monthly boat based ornithological surveys that took place between 2012 and 2014 are now more than five years old and may not necessarily be representative of current ornithology baseline at the site, especially for species that have undergone changes to population size over that period. The proposed solution is to use population trend information to adjust the abundance estimates from the survey results previously and use this as the basis for assessment. We disagree with this proposal and consider that two full years of survey data should be collected. Bird usage of a site will not simply correlate with local population size but will be influenced by prey distribution, environmental conditions, and a number of

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

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



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

other dynamic factors. These will all change over time, hence the need for recent survey data to inform the assessment of avian usage of the site and consequent risk.

The importance of having recent data to assess the site against is also greater in the context of the recent outbreak of Highly Pathogenic Avian Influenza (HPAI). This is the worst ever outbreak of HPAI in the UK and has already affected a large number of birds, including seabirds on Orkney, with high mortality rates in a short time period. Notably, mortalities of great skua and northern gannet are both into the thousands. Both these species are qualifying species of Special Protected Areas (SPAs) in foraging range of the proposed development. We are exceedingly concerned about the cumulative and in combination impact of offshore development on seabirds in light of this additional pressure.

In regard to use methods of analyses, both Encounter Rate Models (ERM) and Collision Risk Models (CRM) are recommended in SNH (2016) "Assessing collision risk between underwater turbines and marine wildlife" for use in the determination of ornithological impacts arising from tidal stream devices and represent the best approaches currently available. It is however important to note that both are theoretical, entirely unvalidated and therefore subject to considerable uncertainty as to the accuracy of the predicted outputs. The extent of this uncertainty means that precaution is needed in making any assessment and the reliance placed on that assessment.

In relation to non-native species, we are concerned that biosecurity measures could be overlooked on the basis that devices will come from similar area in the UK. Although this may reduce the likelihood of NNS species, there still needs to be robust biosecurity plans in place. We consider the potential effects from device deployment would better be described as potentially important rather than not important and as such consider it should be scoped into the ES.

Finally, we are in a joint nature and climate emergency and our actions to reduce the impacts on one must not worsen the other. Test sites are vital to expose new technologies to real-life conditions but also provide great opportunity to understand their impacts on nature. This way, when a project is deployed on a commercial basis, better information is available for assessment and some uncertainties can be reduced. As part of the increase in the duration and capacity of the development, mechanisms for the collection of impact data should be designed into the project. We would also be grateful to receive any information you collect in due course.

Yours sincerely,

Senior Marine Conservation Planner

Royal Yachting Association

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

13th July 2022

Emma Lees
Marine Scotland – Marine Planning and Policy
Scottish Government
Marine Laboratory,
375 Victoria Road,
Aberdeen,
AB11 9DB

ms.marinerenewables@gov.scot

Dear Ms Lees,

MS/22/62 - European Marine Energy Centre - Consultation on Request for Scoping Opinion

I have read the scoping report for the above development on behalf of RYA Scotland and am happy for recreational boating to be scoped out. This is on the basis that the mitigations at the existing site, including marking and lighting, have worked well. I am unaware of any incidents in the site involving recreational craft.

Yours sincerely,

Dr G. Russell FRMetS MCIEEM
Planning and Environment Officer, RYA Scotland

Scottish Environment Protection Agency

From: [Planning.North](#)
To: [MS Marine Renewables](#)
Subject: RE: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 14 July 2022 - SEPA Response 5589
Date: 15 June 2022 08:38:56

OFFICIAL

Hi Emma,

Hope you are well. Unfortunately, this type of development falls below our consultation thresholds. Instead please refer to Table 1 of our standing advice which are available on our website - [Marine Scotland – SEPA standing advice for Marine Scotland on marine licence consultations](#).

If you are seeking advice on something specific then please re-consult us specifying what advice you require.

Many thanks

Cerian

Cerian Baldwin
Planning Officer - Planning Service North
Graesser House, Dingwall Business Park, Dingwall
Email: planning.north@sepa.org.uk
[redacted]

[Who's whom in Water and Planning?](#)

Please note my working days are Tuesday to Thursday only.

Disclaimer

The information contained in this email and any attachments may be confidential and is intended solely for the use of the intended recipients. Access, copying or re-use of the information in it by any other is not authorised. If you are not the intended recipient please notify us immediately by return email to postmaster@sepa.org.uk. Registered office: Strathallan House, Castle Business Park, Stirling FK9 4TZ. Under the Regulation of Investigatory Powers Act 2000, the email system at SEPA may be subject to monitoring from time to time.

Transport Scotland

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

Your ref:

Our ref:
GB01T19K05

Date:
06/07/2022

ms.marinerenewables@gov.scot

Dear Sirs,

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

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

SCOPING REPORT - FALL OF WARNESS TIDAL TEST SITE, EMEC

With reference to your recent correspondence on the above development, we acknowledge receipt of the Scoping Report prepared by European Marine Energy Centre Ltd (EMEC) in support of the above development.

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

Proposed Development

We understand that EMEC are seeking Section 36 consent for a tidal test site at Fall of Warness, Orkney, and that the application is a proposal to extend and expand an existing Section 36 consent for the site to allow a project duration to 2040 and a site generating capacity of up to 50 MW. Having reviewed the SR, we note the site location is west of the island of Eday in the Orkney Islands.

Given there are no trunk roads on either Eday or the wider Orkney Islands, Transport Scotland is satisfied that this proposal will have no impact on the trunk road network. Consequently, we can confirm that no further information is required in this regard.

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

Yours faithfully

pp Gerard McPhillips

**Transport Scotland
Roads Directorate**

cc Alan DeVenny – SYSTRA Ltd.



Whale and Dolphin Conservation

From: [Sarah Dolman](#)
To: [MS Marine Renewables](#)
Subject: RE: European Marine Energy Centre - Consultation on Request for Scoping Opinion - Response Required by 14 July 2022
Date: 14 June 2022 18:59:10
Attachments: [image001.png](#)
[image002.png](#)

Hello

I'm leaving WDC in a few weeks, and I would like to be unsubscribed from the licensing email list please. My colleague Fiona Read is on it still.

Thanks
Sarah

Sarah Dolman
Bycatch manager

WDC, Whale and Dolphin Conservation
Telephone: [+44 \(0\)1283 246 237](tel:+441283246237)
whales.org

