marinescotland

Scottish Government
Riaghaltas na h-Alba
gov.scot

T: +44 (0)300 244 5046
E: ms.marinelicensing@gov.scot

Dr Campbell Fleming
EnviroCentre Ltd
Craighall Business Park
8 Eagle Street
Glasgow
G4 9XA

Date: 6th March 2020

Dear Dr Fleming,

SCREENING OPINION UNDER PART 2, REGULATION 11 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 (AS AMENDED)

Thank you for your screening opinion request dated 1 March 2019 and supporting documentation dated 8 November 2019, in regards to the proposed licensable marine activities related to the Hunterston Marine Construction Yard Redevelopment, namely extending and strengthening the existing hammerhead quay wall and jetty together with dredging activities ("the Proposed Works").

The Scottish Ministers consider the Proposed Works to fall under paragraphs 10(g) and 10(m) of schedule 2 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) ("the 2017 MW Regulations"). The area of the Proposed Works meets each of the corresponding thresholds described in column 2 of schedule of 2 the 2017 MW Regulations. Consequently, the Scottish Ministers are obliged to adopt a screening opinion as to whether the Proposed Works are, or are not, an Environmental Impact Assessment ("EIA") project under the 2017 MW Regulations.

Under regulation 10(5) of the 2017 MW Regulations, the Scottish Ministers have consulted with the relevant local planning authority North Ayrshire Council ("NAC"), Scottish Natural Heritage, Scottish Environment Protection Agency ("SEPA") and Historic Environment Scotland as to their view on whether the Proposed Works are an EIA project. In addition, advice was sought from Marine Scotland Science. Copies of the consultation responses received are attached for your review (at Appendix I).

When making a determination as to whether schedule 2 works are an EIA project, the Scottish Ministers must take into account such of the selection criteria set out in schedule 3

of the 2017 MW Regulations as are relevant to the works. In this regard, the Scottish Ministers have considered the following:

Characteristics of the works

The Proposed Works include the removal of existing rock armour, construction of a combi-wall and anchor walls via vibratory and impact piling and tie rod installations to extend and strengthen the existing hammerhead quay wall and jetty. The Proposed Works will result in increased underwater noise, particularly in relation to piling activities, which has the potential to impact marine mammals and fish species.

To allow ready access and egress to the existing dry dock, the revetment and sand bund currently enclosing the seaward boundary of the dry dock will be demolished, including the removal of 3989 square metres ("m^2") of rock armour, to be replaced with a new concrete caisson gate structure. The removed rock armour, along with 4441m^2 of additional rock armour will be installed to the hammerhead quay and around the dry dock.

Additionally, a deeper and larger navigation channel with a depth of -10 metres chart datum will be created. An estimated 615,000 cubic metres ("m^3") of material, predominantly sand, will be dredged from the approaches to the hammerhead quay (423,000m^3) and the new caisson gates (192,000m^3). The dredge material, mainly sand, is due to be deposited above Mean High Water Springs.

The dredging activities are likely to result in changes in turbidity and siltation rates, furthermore post-dredging siltation may cause smothering of benthic species and habitats both within and adjacent to the footprint of the Proposed Works. In addition, slumping of the beach material may occur.

SEPA have advised that the presence of elevated levels of radioactivity in the sediments associated with the Proposed Works cannot be precluded. The Hunterston A and B sites have made authorised discharges of aqueous radioactive waste to the marine environment throughout their lifetimes. Environmental monitoring in the vicinity of the sites has also detected the presence of Sellafield sourced radionuclides. The appropriate authorities would however, as standard process for any application, require full characterisation of any dredge material.

Location of the works

The Hunterston Construction Yard is situated on the River Clyde adjacent to the Southannan Sands, which are designated as a Site of Special Scientific Interest ("Southannan Sands SSSI"). The notified feature of the Southannan Sands SSSI is sandflats. The Southannan Sands SSSI supports extensive areas of dwarf eelgrass (*Zostera noltei*) which are found on the sandflats. These seagrass beds are protected as a habitat listed in Annex 1 of the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ("Annex 1 habitat"), a priority marine feature ("PMF") and a UK Biodiversity Action Plan species. In addition, within the Southannan Sands SSSI there is a mussel reef which supports a native oyster (*Ostrea edulis*) bed. Both horse mussel (*Modiolus modiolus*) and common mussel (*Mytilus edulis*) beds are protected as biogenic reefs as Annex 1 habitats and are listed as PMFs. Furthermore, native oyster beds are listed as a PMF and are on the OSPAR List of Threatened and/or Declining Species and Habitats.

Benthic surveys of the site have also identified the presence of dwarf eelgrass (*Zostera noltei)* within the footprint of the Proposed Works. These surveys did not identify common eel grass (*Zostera marina*), horse mussel (*Modiolus modiolus*) or common mussel (*Mytilus edulis*)

within the footprint of the Proposed Works, however the surveys were largely limited to the intertidal area, with little survey effort in the subtidal areas where these benthic species and habitats may occur.

The River Clyde is also home to resident populations of harbour porpoise (*Phocoena phocoena*) and common dolphins (*Delphinus delphis*). It is likely that these European Protected Species ("EPS") will be disturbed by the underwater noise generated by the Proposed Works and mitigation will be required.

Characteristics of the potential impact

The Proposed Works will result in removal of habitat within the dredge area, although the extent of the loss of seagrass bed is unclear. The map of bathymetry provided by the applicant suggests that there is an intertidal strip that will be dredged where dwarf eelgrass (*Zostera noltei*) is likely to be present. It is not however possible to predict how much seagrass will be lost from the subtidal area which has received limited survey effort.

In addition to the removal of habitat, impacts on dwarf eelgrass (*Zostera noltei*) from dredging are likely to be more widespread than just the footprint of the Proposed Works, including that which is present in the surrounding part of the Southannan Sands SSSI. Dwarf eelgrass (*Zostera noltei*) has a high sensitivity to changes in suspended solids, smothering and changes in siltation rate which are likely to result from the dredging activities. In the absence of sediment plume modelling the extent of these effects are not clear. Dwarf eelgrass (*Zostera noltei*) is also highly sensitive to changes in sediment type. The hydrodynamic modelling provided by the applicant suggests a decrease in current in the dredged zone and therefore there is a risk of a change in sediment.

The dredging activities may also have significant effects on the mussel reef which supports a native oyster (*Ostrea edulis*) bed within the Southannan Sands SSSI. Horse mussels (*Modiolus modiolus*) are highly sensitive to substrate loss, smothering and changes in water flow rate, meanwhile common mussels (*Mytilus edulis*) are intolerant of smothering. In addition, oysters (*Ostrea edulis*) are highly sensitive to substrate loss, smothering and synthetic compound contamination. The full extent of these impacts from the Proposed Works are not known given the limited survey effort within the subtidal area.

The Proposed Works also have the potential to have a significant effect on the marine mammals, in particular as result of underwater noise. An EPS licence for disturbance is likely to be required.

There is also potential for cumulative impacts in respect of the underwater noise on fish species and marine mammals, the effects on the Southannan Sands SSSI and on benthic interests.

Conclusion

Based on the information provided and advice received, the Scottish Ministers are of the opinion that the Proposed Works are likely to have significant effects on the environment and are an EIA project under the 2017 MW Regulations and, therefore, an EIA is required to be carried out in respect of the Proposed Works.

If you increase, alter or extend the Proposed Works, you are advised to contact Marine Scotland - Licensing Operations Team again to confirm if the screening opinion is still valid.

A copy of the screening opinion has been forwarded to NAC planning department. The

screening opinion has also been made publicly available through the Marine Scotland Information website.

If you require any further assistance or advice on this matter, please do not hesitate to contact me.

Yours sincerely
[Redacted]

Malcolm Rose
Marine Licensing Group Leader
Licensing Operations Team
Marine Scotland

Appendix I. Consultation responses

Historic Environment Scotland

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

By email to:
MS.MarineLicensing@gov.scot

Marine Scotland
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

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

Our ref: PA
Our case ID: 300036175

21 March 2019

Dear Sir/Madam

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (As Amended)
Consultation Under Part 2, Regulation 10(5)
Hunterston Marine Construction Yard Redevelopment, Hunterston, North Ayrshire
Request for Screening Opinion

Thank you for your consultation which we received on 12 March 2019 seeking our comments on an Environmental Impact Assessment (EIA) screening opinion for the above proposed development. This letter contains our comments for our historic environment interests. That is world heritage sites, scheduled monuments and their setting, category A-listed buildings and their setting, gardens and designed landscapes and battlefields on their respective Inventories.

Your archaeological and conservation advisors will also be able to offer advice for their interests. This may include unscheduled archaeology, category B- and C-listed buildings and conservation areas.

Our Screening opinion
We have no comments to make on the requirement or otherwise for an EIA for this proposed development. However, you may find the information provided below helpful in reaching your decision on the matter.

Our advice
We note that no heritage assets covered by our interests in the EIA and planning processes are likely to be significantly affected by the proposed development. We note that the nearest heritage asset covered by our interests is more than 1 km from the proposed works.

As you will be aware, there is no requirement to consult the consultation bodies at the screening stage of the EIA process. This is illustrated in table 1 of the Scottish Government's Planning Advice Note (PAN) 1/2013 (as amended). The PAN notes that planning authorities may consult the consultation bodies in exceptional circumstances for specialist advice and that such requests should be targeted and specific.

We have not been able to identify any potentially significant impacts for our interests. Please contact us with more detail if there is any more specific information we can provide which may be helpful to in coming to a screening opinion.

We hope this is helpful. Please contact us if you have any questions about this response. The officer managing this case i [Redacte and they can be contacted by phone o [Redacte .

Yours faithfully

Historic Environment Scotland

North Ayrshire Council

FW: Peel Ports Group Ltd (per EnviroCentre Ltd) – Hunterston Marine Construction Yard Redevelopment, Hunterston, North Ayrshire – Consultation on Request for Screening Opinion – Response Required by 1 April 2019 [PUBLIC]

[Redacte

Tue 09/04/2019 14:24

To:MS.MarineLicensing@gov.scot <MS.MarineLicensing@gov.scot>;

Dear sir/madam,

I refer to your email consultation in connection with the above. The Council, as Planning Authority, is of the view that the proposed works, as outlined in your email dated 11th March 2019, are not an EIA project as defined in the EIA Regulations, for the reasons given below.

The Council notes that Peel Ports has sought an EIA Screening opinion from Marine Scotland in respect of works to Hunterston Construction Yard; namely the formation of caisson gates and replacement of jetty. Peel had previously sought an opinion from Marine Scotland in 2017 in respect of the works. Marine Scotland's opinion was that an EIA was not required.

Planning permission was granted 25th April 2018 for

i.) Application under Section 42 of the Town and Country Planning (Scotland) Act 1997 to vary Condition 1 of Planning Permission ref 16/00268/PP to allow use of the site for decommissioning of large marine structures (ref: 17/01273/PP); and
ii.) 'Erection of caisson gates and subsequent removal of existing bund,' (ref: 18/00132/PP); and
iii.) 'Replacement and enlargement of existing jetty,' (ref: 18/00134/PP).

Prior to the submission of these applications, the Council, as Planning Authority, gave its own EIA Screening opinion to Peel Ports. The Council's opinion was that EIA was not required. This consultation from Marine Scotland has been sought because some proposed factors have changed in relation to Marine Scotland's understanding of the development. Marine Scotland has confirmed that the main changes are as follows;

1. An increased volume of dredging
2. Confirmation that the jetty is a replacement and not alterations to existing – Marine Scotland were originally not clear on this point.
3. Additional areas of rock armour to be formed.

Marine Scotland has sought the Council's, as Planning Authority, opinion on Peel Ports' request.

In respect of No. 1, dredging is a matter for Marine Scotland and not something for which planning permission is required.

In respect of No. 2 planning permission has been granted for 'replacement and enlargement of existing jetty' 25th April 2018 (ref: 18/00134/PP). Therefore the Council was always clear that the jetty is a replacement.

In respect of No. 3, most of the additional rock armour to be formed is shown on the approved drawings of the above planning permission. Therefore this work has planning permission. There are portions next to permitted caisson gates which are not shown on approved planning drawings. Planning will contact Peel Ports for further information on this alteration. Despite further information being required in respect of the rock armour adjacent to the caisson gates, the Council's response remains the same as previous, that the Council, as Planning Authority, does not consider that EIA is required.

The Planning permissions, granted on 25th April 2018 (ref: 18/00132/PP), for 'erection of caisson gates and subsequent removal of existing bund,' and (ref: 18/00134/PP) for 'replacement and enlargement of existing jetty,' are subject to the following condition:

That prior to the commencement of development a Construction Method Statement shall be provided for the written approval of North Ayrshire Council. The Construction Method Statement shall include: i) a pre-construction survey for protected marine mammals, protection measures during construction and details of proposed monitoring of the site by a competent observer during the demolition of the bund and construction works; ii) the method and timetable for demolition and disposal of surface material relating to the existing bund; iii) proposed timetable and procedure for construction; iv) methods of construction; v) risk assessment (including potential impacts of construction on marine mammals); and, vi) details of preventative measures to avoid long term impacts on marine mammals, pollution of the foreshore and SSSI. If agreed, the development shall proceed in compliance with the method statement to the satisfaction of North Ayrshire Council as Planning Authority.

Both developments were subject to screening under the Town and Country Planning Environmental Impact Assessments (Scotland) Regulations 2011 prior to submission of the applications. It was considered, in terms of those regulations, that EIAs were not required. The information provided in respect of this request to Marine Scotland does not change the Council's opinion in this respect.

Regards

[Redacte

Economy & Communities
North Ayrshire Council, Cunninghame House, Irvine KA12 8EE
[Redacte

Encypted Message

From:[Redacte **On Behalf Of** eplanning
Sent: 12 March 2019 08:58
To:[Redacte
Subject: Fw: Peel Ports Group Ltd (per EnviroCentre Ltd) – Hunterston Marine Construction Yard Redevelopment, Hunterston, North Ayrshire – Consultation on Request for Screening Opinion – Response Required by 1 April 2019 [PUBLIC]

FYI

[Redacte

From: <MS.MarineLicensing@gov.scot>
To: <strathclyde_ayrshire@nature.scot>, <planning.sw@sepa.org.uk>, < hmconsultations@hes.scot>, <eplanning@north-ayrshire.gov.uk>
Date: 11/03/2019 16:48
Subject: Peel Ports Group Ltd (per EnviroCentre Ltd) – Hunterston Marine Construction Yard Redevelopment, Hunterston, North Ayrshire – Consultation on Request for Screening Opinion – Response Required by 1 April 2019

Scottish Environment Protection Agency

Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

Our ref: PCS/164355
Your ref:

If telephoning ask for:
[Redacte

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

26 March 2019

By email only to: MS.MarineLicensing@gov.scot

Dear Sir / Madam

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Consultation Under Part 2, Regulation 10(5) of The EIA Regulations
Hunterston Marine Construction Yard Redevelopment, Hunterston, North Ayrshire

Thank you for consulting SEPA on the screening opinion for the above development proposal which we received on 12 March 2019.

We consider that, with respect to our interests, Environmental Impact Assessment is not required for the above proposal.

The project covered by the Marine Licence and as described in the information submitted to Marine Scotland as part of the Licensing procedure does not fall under the definition of 'Schedule 1 Works' as specified under The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (Marine EIA Regulations).

Whilst dredging comprises a large part of the works to be undertaken our consideration of 'Schedule 2 Works' under the Marine EIA Regulations indicates that this is not primarily for extraction of minerals and therefore does not does not fall under Schedule 2 of the Regulations.

Notwithstanding whether an Environmental Impact Assessment is required SEPA expect that best practice is adopted and appropriate steps taken to prevent water pollution and minimise disturbance to sensitive receptors. Details of good practice advice for the applicant can be found on the Regulations section of our website.

If you have any queries relating to this letter, please contact me by telephone o [Redacte or e-mail at planning.sw@sepa.org.uk.

Yours faithfully

[Redacte
Senior Planning Officer
Planning Service

[Redacte

From: [Redacte
Sent: 18 February 2020 18:02
To: [Redacte
Subject: Clyde Sediments

Dear [Redacted]

Thank you for your email.

We were consulted on the Hunterston Marine Construction Yard redevelopment under The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017. The works did not fall under the definition of Schedule 1 or 2 works as specified under the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (Marine EIA Regulations), it was therefore our view that it did not qualify under EIA.

This does not mean that appropriate controls are not required during any works to manage and mitigate environmental impacts. We note from the application that an investigation to establish sediment characteristics and the presence or not of contaminated material will be carried out and we would expect that the applicant would submit an application for marine dredging to Marine Scotland prior to these activities taking place.

The presence of elevated levels of radioactivity in the sediments associated with the development cannot be precluded. The Hunterston A and B sites have made authorised discharges of aqueous radioactive waste to the marine environment throughout their lifetimes. Environmental monitoring in the vicinity of the sites has also detected the presence of Sellafield sourced radionuclides. Should the developer be planning to undertake the dredging of marine sediments, they should consider the possibility that dredged material could constitute radioactive waste. If this were the case then the developer will be responsible for the management and disposal of the waste and they will need a permit in accordance with EASR (2018) prior to generating any radioactive waste. It is recommended that a condition is placed on this application to ensure that the developer undertakes a comprehensive survey to determine whether the sediments would constitute radioactive waste prior to any dredging activity. This should be completed by suitable qualified and experienced persons.

I trust this is helpful.

Regards,

[Redacted]

[Redacte
Planning Unit Manager (SW)
SEPA Dumfries Office
Lochside Industrial Estate
Irongray Road
Dumfries
DG2 0JE

From: [Redacte
Sent: 05 February 2020 11:14
To [@SEPA.org.uk>[Redacte sepa.org.uk>;[Redacte @SEPA.org.uk>
Subject: Clyde Sediments

[Redacted]

Scottish Natural Heritage

[Redacte

From: [Redacte
12 April 2019 15:31
To: MS Marine Licensing
Subject: RE: URGENT - Peel Ports Group Ltd (per EnviroCentre Ltd) – Hunterston Marine Construction Yard Redevelopment, Hunterston, North Ayrshire – Consultation on Request for Screening Opinion – Response Required by 1 April 2019

Dear [Redacted]

Thank you for consulting SNH over the screening of the above amended proposals.

The amendments to the proposals may bring a slightly increased level of risk to the notified features of the Southannan Sands Site of Special Scientific Interest and specially protected species living in the area of the proposed development.

- We note the changes to the dredged volumes and the increase in the amount of new rock armour that will be installed. These changes could potentially lead to alterations in the wave regime and tidal movements over the adjacent areas of the SSSI. This concern should be investigated and the potential requirement for mitigation measures should be considered.

- There are resident populations of cetaceans (harbour porpoise and common dolphin) and seals in the vicinity of the construction operations. Potential impacts and mitigation proposals should be fully assessed.

Both of these potential areas of environmental impact could be assessed as standalone investigations or as part of a formal Environmental Impact Assessment.

As a general comment, we are aware that the proposals which form the subject of this current consultation are a component part of a larger project to establish an oil decommissioning facility utilising the former construction yard and additional port facilities at Hunterston. This larger project has components that will require waste management licences and planning permissions in addition to the marine licences. All of these individual components of the project are being assessed separately and no overall assessment will take place.

Should you wish to discuss any of the matters raised above in further detail, please do not hesitate to get in touch.

Your sincerely

[Redacted]

[Redacte | **Operations Area Officer**

Scottish Natural Heritage | 31 Miller Road | Ayr | KA7 2AX | **t:** 01292 270760
nature.scot – *Connecting People and Nature in Scotland* - *@nature_scot*

From: MS Marine Licensing
Sent: 11 March 2019 16:49
To: 'strathclyde_ayrshire@nature.scot' <strathclyde_ayrshire@nature.scot>; 'planning.sw@sepa.org.uk'

Scottish Natural Heritage
Dualchas Nàdair na h-Alba
nature.scot

[Redacte
Scottish Government
Marine Scotland
375 Victoria Road
ABERDEEN
AB11 9DB

Date: 16 January 2020
Our Ref: CNS/MSA/NA: CEA157593

Dear Sirs

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (As Amended) ("the EIA Regulations")
Consultation Under Part 2, Regulation 10(5) of the EIA Regulations
Peel Ports Group (per EnviroCentre Ltd) – Hunterston Marine Construction Yard Redevelopment, Hunterston, North Ayrshire

Thank you for consulting Scottish Natural Heritage (SNH) over the above screening proposals**.**

Please accept my apologies for the delay in our response. I trust that you will find the following remarks useful:-

1. I note that the screening request refers to the aspects of the larger Hunterston project (the redevelopment of the harbour and rig construction yard into a rig decommissioning facility), which falls within the remit of your licensing regime.

2. I can confirm that the boundary of the Southannan Sands SSSI is fixed on the MLWS line that was depicted on the OS map at the time the SSSI was notified.

   The proposed dredge pocket does not directly impinge on the notified area of the SSSI.

   It is of course possible that the dredging operations could lead to indirect impacts on the SSSI. This could be through changes to the tidal currents and wave patterns or by movements or slumping of the beach sediments. The latter point has become more important since our response to the earlier screening request, a mussel reef supporting a native oyster bed has been discovered within the SSSI close to the proposed dredge site.

3. In terms of the studies that should be undertaken to appraise the potential impacts of the proposals, the issues identified in the paragraph above should be thoroughly researched. Any mitigation identified through this work should be conditional to any licence that may be granted.

   The/

The applicants agents have suggested that they believe that the impacts of the dredging can be supplied at a later date (along with a separate dredge licence application), however, there is the possibility that the changes in the hammer-head quay would have cumulative or in-combination impacts with the dredging proposals. This assessment should not be left to a later date.

4. Marine mammals

   We note the proposals to address these issues through the EPS licences process. Potentially this may be an appropriate way forward, however, there remains a risk that a licence may not be granted. We would recommend that the applicants produce an assessment of the populations, the potential risks and possible mitigation measures as part of the application process. This would enable SNH to indicate the likely success of a licence application at the time that the marine licence activity is approved.

While we recognise that Marine Scotland can only consider the issues directly connected to your specific licensing processes, there remains no overall assessment of the full industrial development which is being brought forward.

Yours faithfully

[Redacte
Area Officer
Ayrshire and Arran
Strathclyde and Ayrshire

Scottish Natural Heritage
Dualchas Nàdair na h-Alba
nature.scot

[Redacte
Marine Scotland – Marine Planning and Policy
375 Victoria Road
ABERDEEN
AB11 9DB

Date: 17 February 2020
Our Ref: CNS/MSA/NA: CEA157593

Dear Sirs

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (As Amended) ("the EIA Regulations")
Consultation Under Part 2, Regulation 10(5) of the EIA Regulations
Peel Ports Group (per EnviroCentre Ltd) – Hunterston Marine Construction Yard Redevelopment, Hunterston, North Ayrshire

Further to our earlier correspondence (letter and email dated 16 and 24 January), I am writing to provide further advice in respect of your request on the requirements for EIA screening in respect of this proposal.

We were originally requested to provide advice on this EIA screening opinion in 2017, with a subsequent request in 2019. The proposals, as we understand them include:

- Construction of a jetty
- Removal of existing rock armour
- Construction of a combi wall / anchor wall and tie rods.

All of the above, are to facilitate this area of the port as a heavy lifting area with the overall aim to transform this part of the port into an oil decommissioning facility. Since the earlier screening opinion request, supplementary information has been submitted, providing further information for our consideration on:

- Marine Mammal Protection Principles and
- Coastal Hydrodynamic and Wave Assessment

As per our earlier advice, and the applicants own documentation, we have identified that there are likely to be significant environmental impacts that could occur during both the construction and operation of this facility and that this is likely to fall within Schedule 2 of the EIA Regulations.

If Marine Scotland, as the Competent Authority agree with this, then an Environmental Impact Assessment will require to be carried out to support the Marine Licence application. If you disagree, we would still recommend that as part of any application, supporting information is provided as set out below.

To help enable this process, we suggest it may be preferable for all parties to meet and agree the scope of what any EIA Report (or equivalent) should contain

and what methods for assessment should be used. From our perspective, we would be looking for the following information to be included, but not restricted to:

- Assessment of dredging activities including method and volume, disposal locations and the effects on the hydrodynamic and wave regime of the adjacent coast.
- Potential impacts to the Southannan Sands SSSI, including consideration of indirect effects from the dredging works. This should also consider impacts on the recently discovered mussel reef, supporting a native oyster bed.
- Potential underwater noise impacts, including noise modelling and the consideration of the impacts to marine mammals and fish species. A construction method statement detailing mitigation should be included as part of the EIA report.
- Cumulative considerations, particularly in respect of the multiple activities potentially under different consenting regimes that may result in underwater noise, effects on the SSSI and benthic interests from this proposal, as well as with wider port activities.

Providing one report focussing on the significant effects agreed as part of a scoping exercise (or equivalent) would enable the relevant information to be made available to enable the suitable assessment of all relevant proposals.

I trust this clarifies our advice, but please do not hesitate to contact myself if you wish to discuss any aspect of our advice or to arrange any further pre application discussions.

Yours faithfully

[Redacte
Operations Manager
Strathclyde and Ayrshire

Marine Scotland Science

[Redacte

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

PEEL PORTS LIMITED: HUNTERSTON CONSTRUCTION YARD DEVELOPMENT – REQUEST FOR MSS COMMENTS

Marine Scotland Science has reviewed the submitted pro forma and has provided the following comments.

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

Marine Mammals

MSS have reviewed the Further Information to Inform Screening Decision Hunterston Marine Construction Yard Redevelopment, 8th November 2019 for the proposed plans for Marine Mammal Protection Principles and, based on the limited information provided, MSS are broadly content with the approach proposed.

MSS are content with the species highlighted for inclusion in the assessment and the data sources listed for updating the baseline information.

MSS recommend that MS-LOT seek clarification on which thresholds are to be used in the updated assessment of the impacts of underwater noise on marine mammals. MSS would be content if either the NOAA (NMFS, 2018) updated guidelines or Southall et al (2019) are used.

National Marine Fisheries Service (2018). Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts. Silver Spring, U.S. Department of Commerce, NOAA. NOAA Technical memorandum NMFS-OPR-59: 167.

Southall, B., et al. (2019). "Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects." Aquatic Mammals 45(2): 125-232.

Regards

[Redacte
Marine Scotland Science

[Redacte

[Redacte

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

PEEL PORTS LIMITED: HUNTERSTON CONSTRUCTION YARD DEVELOPMENT – REQUEST FOR MSS COMMENTS

Marine Scotland Science has reviewed the submitted information and has provided the following comments.

Benthic Ecology

MSS understands that the proposal to construct the new dry dock gate will involve the dredging and excavation of 150,000 to 200 000 m^3 of sand.

MSS has been asked to provide comment on potential impact on protected features at this site and whether the survey was adequate to detect species that were not found in the area that could be impacted by the dredging and excavation.

The sandflats present in the region are described as being composed of fine sand and sandy mud substrates with occasional cobbles and pebbles close to the strandline. The site, currently the Hunterston construction yard, is bordered on either side by the Southannan Sands SSSI. The SSSI supports extensive areas of the dwarf eelgrass *Zostera noltei* which are found on the sandflats.

Seagrass beds are protected as an Annex I habitat, as a PMF and are on the UKBAP list. Beds of *Z. noltei* support numerous epiphytes and a diverse sediment community, they are used by spawning fish and are grazed upon by wildfowl (further information on this habitat can be found here: Marlin). They are also known to stabilise the sediment. Horse mussel *Modiolus modiolus* beds and common mussel *Mytilus edulis* beds are protected as biogenic reefs as Annex I habitats and are listed as PMFs. Native oyster *Ostrea edulis* beds are listed as a PMF and by OSPAR.

The biological survey was carried out by a surveyor at 20 metre intervals parallel to the shore. The surveyor used a glass bottomed bucket when subtidal and a grapnel when beyond wading depth. No details of the grapnel, e.g. how many samples or depth were given of the grapnel method.

Seagrass beds

The biological survey appears adequate to survey much of the likely *Z. noltei* habitat as this species is largely intertidal. However, the survey does not seem adequate to assess the presence of the common eel grass *Zostera marina*. *Z. marina* can occur between 0 to 10 m depth. From the survey description, the area beyond wading depth received little survey effort.

The survey reports the presence of the dwarf eel grass *Zostera noltei* and not the common eel grass *Zostera marina.* However, this may have been because the survey took place mostly in the intertidal area that coincides with *Z. noltei* habitat and not *Z. marina*, since this occurs in deeper water. The dredging will result in a loss of seagrass bed in the area which coincides with presence of the species. It is unclear how much seagrass will be

lost from the dredged area as this information is not provided. It should be possible to predict the amount that will be lost from the survey that was carried out but not for the subtidal area as this received little survey effort.

The map of bathymetry suggests that there is an intertidal strip that will be dredged where *Z. noltei* is likely to be present. It is also likely that the *Z. noltei* present in the surrounding area, which is part of the SSSI will be impacted by the dredging. *Z. noltei* has a high sensitivity to changes in suspended solids (turbidity), smothering and changes in siltation rate (MarESA review) which are likely as a result of dredging. Therefore the impact on Z. *noltei* is likely to be more widespread than just the footprint of the dredged area. It is also highly sensitive to changes in sediment type. A change to a coarser sediment (e.g. gravelly sediments) would inhibit seagrasses from becoming established due to a lack of adequate anchoring substratum, while a change to a muddier habitat could increase sediment re-suspension and exclude seagrasses due to unfavourable light conditions. The hydrodynamic modelling suggests a decrease in current in the dredged zone and thus there may be a change to finer sediment particles in this region.

Horse mussel

No horse mussel *Modiolus* or horse mussel beds were found in the survey but the survey was largely in the intertidal region and did not focus on deeper water where horse mussels usually occur. In the Environmental review (Section 2.3 Constrains) it states that it was not possible to target an area of the seabed because it was too deep to wade. The developer states that this is unlikely to significantly affect results because horse mussels occur only to 5 metres. This statement is not true. Horse mussels occur from the lower intertidal to c 208 m! It is the common mussel *Mytilus edulis* that occurs from the intertidal to approx. 5 m.

Horse mussels, should they occur, are highly sensitive to substrate loss, smothering, changes in water flow rate (MarESA review).

Common mussel

It is unclear whether common mussel *Mytilus edulis* or mussel beds occur in the region that may be disturbed through dredging. No evidence of common mussel was found in the biological survey. However, in the further information provided on Hunterston (Nov 2019) it states,

"Finer mud sized sediment was relatively sparse across Southannan Sands with the exception of around the mussel beds and in the areas of the slowest currents, within the dredged area of the Construction Yard quay and around the margins of the southern area of Southannan Sands."

Table 3.1 of the further information document (Nov 2019) also mention mussel deposits in the sediment. Therefore it appears likely that mussel beds are in the region and may be present in the deeper reaches of the dredged area or in the surrounding area that may be affected by the sediment plume caused by the dredging.

From the information provided it appears as if the biological survey did not adequately survey the subtidal region, and so common mussels may have been missed from the survey. The survey was limited to the depth that could be waded by the surveyor. It states that a grapnel was thrown into the deeper area but it is unclear how much the surveyor was able to survey by this method. Should there be common mussels present in the area to be dredged, the loss of substratum will entail the removal of the population and its associated community. However, it is unlikely that there are common mussel present on the sand, because they usually settle on hard substrate. It is more likely that common mussels in the surrounding area are impacted by changes in sediment as a result of the dredging. Common mussels are reportedly not sensitive to changes in suspended sediment or to changes in current regime as might be expected from the proposed dredging. However, they are less tolerant of smothering which could also occur post-dredging. Common mussel beds have reportedly been buried by large-scale movements of sand (MarESA review).

Native oysters

Native oysters *Ostrea edulis* are not mentioned in the survey but are known to occur in this part of the Clyde (https://species.nbnatlas.org/species/NHMSYS0020975316). This species can occur over a range of shallow coastal water habitats on mud, muddy sand, muddy gravel with shells or rock. It is therefore a possibility that it could be present at this site.

Conclusions

In conclusion MSS recommends modelling the predicted extent of the sediment plume that will occur post-dredging and conducting a sub-tidal survey on the benthic species and habitats that occur in this area. MSS

considers it likely that there is a degree of impact on the *Zostera noltei* beds in the dredged area and in the adjacent SSSI. Note, that being an Annex I habitat and PMF, seagrass beds gain protection both within and outwith the SSSI. MSS would like to see a prediction of the extent of this damage to these seagrass beds and whether it is significant in terms of the population as a whole.

Physical environment / coastal processes

MSS have reviewed the Further Information to Inform Screening Decision Hunterston Marine Construction Yard Redevelopment, 8th November 2019 for the Coastal Hydrodynamic and Wave Assessment and, based on the information provided, we are content with the conclusions. Sufficient information has been provided in this document to reach the conclusions that are given. The conclusions (see below) are now supported by this study, reasonable and valid. The report provided the information that was required to come to this conclusion.

The conclusions state: Any predicted changes to the tidal regime (tidal levels and current speed), wave climate, and sediment transport processes will be local to the proposed works and will be relatively minor, resulting in no significant impacts.

This provision of the additional coastal processes study report supplements their screening request report. It now provides hydrodynamic modelling results and an investigation of coastal processes including waves, tides and sediment transport. The model used is fit for purpose, using MIKE with a flexible mesh and 11 days of simulations (with output of surface elevation, current speed and direction, bed shear stress). This report presents the baseline and the findings of pre and post-development (intermediate phase and final phase with all work completed) hydrodynamic and spectral wave modelling studies, with an assessment of the potential impact of the proposed development on coastal processes, particularly in relation to the adjacent SSSI. The results indicate that the proposed development will only produce very localized change in tidal current speeds, insignificant of the wider hydrodynamic regime and the wave modelling showed negligible change. Even during storm conditions only very localized changes to the wave climate occur.

One criticism of the report is the chapter on model validation. It is short and simplified (without figures) but at least gives some confidence in the model. In future studies it might be worth expanding the validation work a bit.

Hopefully these comments are helpful to you. If you wish to discuss any matters further contact the REEA Advice in-box at [Redacte

Yours sincerely

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Marine Scotland Science

15th January 2020