



Scottish Natural Heritage Dualchas Nàdair na h-Alba

All of nature for all of Scotland
Nàdar air fad airson Alba air fad

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Transport Scotland
[By email]

27 March 2017

Our ref: CDM144912

Dear Val

Aberdeen Harbour Expansion Project – Ministerial approval of CEMD

Thank you for consulting us on the draft Construction and Environmental Management Document (CEMD) for the Aberdeen Harbour Expansion Project.

SNH objected to the expansion project unless it was subject to conditions required to address environmental impacts. Those conditions included the production and implementation of a CEMD to prevent adverse impacts to sites designated for their importance for nature conservation.

In summary, we welcome the positive mitigation that is incorporated in the CEMD, in particular, the consideration that has been given to working methods to help reduce the environmental impacts of the project. Nonetheless, **there remain outstanding matters that need to be amended in the CEMD in order to conclude no adverse effect to the integrity of the Ythan estuary, Sands of Forvie and Meikle Loch SPA, the Moray Firth and River Dee SACs and to prevent adverse impacts to Nigg Bay SSSI.**

Our comments below relate to impacts on these sites and on licensing requirements for protected species. We have not commented on other aspects of the CEMD. Many of our comments have already been provided to Aberdeen Harbour Board to assist them with finalising the CEMD and we understand that we will receive a final draft on 3 April.

1. All Chapters

There should be clarity on the actions arising in each chapter and the roles and responsibilities for implementing them, with clearer cross-referencing between the chapters. Some chapters, such as Chapter 16, helpfully contain a table identifying risks, mitigation, timescale and responsible person. A similar approach should be taken for all chapters, which would assist with cross-referencing actions between chapters and the Environmental Plan.

2. Environmental Plan

2.1 Biological Environment:

The Ythan Estuary, Sands of Forvie and Meikle Loch SPA should be included in the list of sites referred to in section 2.3.1 of the Environmental Plan. It should also be clear that this site, along with the River Dee and Moray Firth SACs, have the potential to be adversely affected by the development, as well as Nigg Bay SSSI (cf second paragraph).



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Information on the features of these sites that could potentially be affected should be made clear in the subsequent paragraphs. The importance of the CEMD in mitigating impacts to these sites should be stated.

2.2 Legal and other requirements.

The Habitats Regulations Appraisal should be added to the bullet points in section 4.2, as it is a legislative requirement applicable to the AHEP and is separate to the ES and other licences and consents. It should also be included in the training programme set out in 5.2.2, such as the toolbox talks.

The requirement for SSSI consent for some works should be referred to (such as for the temporary haul road at the base of the Nigg Bay SSSI).

There should be reference to licensing for marine mammals as EPS and Schedule 1 birds.

2.3 Significant environmental aspects

Table 4.1 should be amended to include protected species and birds, in particular, eider duck of the Ythan SPA. Also, to include the geology interest of Nigg Bay SSSI. For fish, reference should also be made to blasting and pollution.

2.4 Reporting

We wish to be copied into regular updates to MS-LOT on construction activity, issues encountered and how these have been addressed where these are relevant to sites designated for nature. The frequency of these should be specified and agreed with MS-LOT.

3. Moray Firth SAC

The measures relating to bottlenose dolphins are contained mainly in Chapter 7, Dredging, and Chapter 11, Marine Mammal Mitigation Plan.

In order to prevent an adverse effect on the integrity of this SAC the following points need to be addressed:

3.1 Bubble curtains

The agreed procedures (7.2.7.3) in Chapter 7 should be amended to state that the MMO and PAM operators will be contacted prior to blasting taking place, in order to confirm that marine mammals are not present. There should be cross-referencing to the Marine Mammal Mitigation Plan in Chapter 11 and Chapter 8 Fish Species Protection Plan with regard to deployment of bubble curtains.

It should be clarified in which areas blasting will be carried out in open water and not behind the breakwaters.

3.2 Disposal of dredgings

A 20 minute watch time would be sufficient prior to disposal of dredgings (11.5.7). We note that crew members will be trained as MMOs and recommend that occasional use is made of experienced MMOs (see comments below) to provide continued training to those crew members during dredging operations and as a check.

3.3 Marine Mammal Observers (MMOs)

It is not clear how the various jobs for the MMOs fit together and what experience they will have (11.7.2). Clarification should be provided of all the different uses of MMOs and the details of the experience level required for each use. It is important that for at least blasting, the MMO(s) as well as suitable training have several years experience of acting as MMOs for the cetacean species likely to be encountered.

3.4 Passive Acoustic Monitoring (PAM)

The PAM equipment detailed in the CEMD (11.8) is unlikely to be suitable for monitoring bottlenose dolphins and harbour porpoise. Furthermore, a single set of equipment is unlikely to be technically suitable for both PAM and underwater noise monitoring and would prevent both of these from being carried out at the same time:

- It is unclear how PAM will work in practice.
- A suitably trained and experienced PAM operator should be employed specifically for this purpose. Details of their training and experience should be provided.
- The section goes into some detail about using specialised software and that it would be fully configured prior to use – however the detail that follows regarding the data that will be collected relates more to general noise monitoring rather than PAM detections.
- More information should be provided about the software that will be used for PAM (in addition to general noise monitoring).
- It is not clear if the intention is to use this one set of equipment for both PAM and underwater noise monitoring. If the intention is to use the same equipment for both purposes, we would need assurances that this will work practically, for instance, would both types of monitoring be required at the same time? (also see our concerns re the hydrophone below).
- Underwater noise monitoring would require a fully calibrated system. PAM detections not necessarily so, as here the operator is looking for the acoustic vocalisations of cetaceans – to detect them, not to measure them to absolute levels.
- The hydrophone detailed in this appendix does not appear to be suitable for PAM. Whereas the recorder can cope with signals up to 500 kHz, it looks like the hydrophone can only cope with signals up to 90kHz. This is not high enough to detect cetacean echolocation clicks. Harbour porpoise and dolphin species have different click characteristics, but the range of 120 – 145 kHz would accommodate both.

3.5 Underwater noise measurements

We note the proposals to use bubble curtains and given the novelty of this approach in Scottish inshore waters, will ask that initial reports are provided to MS-LOT and ourselves to check the bubble curtains are effective. This should follow the first blasting event as soon as feasible.

More detail on underwater noise measurements are required, which could be provided in a monitoring plan. This should clarify how the measurements will be collected and used, their frequency and how they will be reported to MS-LOT and ourselves. We recommend that advice is taken from an underwater acoustician. It is stated that a specialist sub-contractor would be employed and it would be useful to know who this will be (11.1.1).

3.6 Implementing the plan

Although the plan is detailed, it is difficult to pick out information on the order of actions and who would be responsible for communicating with who. A flow chart or equivalent may be helpful.

4. River Dee SAC

The measures relating to salmon are contained mainly in Chapter 7, Dredging, and Chapter 8, Fish Species Protection Plan.

In order to prevent an adverse effect on the integrity of this SAC the following points need to be addressed:

4.1 Blasting

In order to protect salmon which may be present in Nigg bay, a bubble curtain should always be deployed when blasting takes place, including when blasting takes place behind the

breakwaters. The CEMD should be worded to make it clear that this will be the case (8.4.3) and is in addition to the mitigation in 8.4.2.

We welcome the proposed use of a double bubble curtain (8.4.3) and note that this may revert to a single if this is shown to reduce noise sufficiently. We ask to be consulted over this decision before a change to the method takes place.

The majority of information relating to blasting is contained in Chapter 7 Dredging and Dredge Spoil Disposal Management Plan and in Chapter 11 Marine Mammal Mitigation Plan. There is no mention of use of a bubble curtain in Chapter 7 and this should be amended to ensure that the details of a working method provided in Chapter 11 are incorporated into Chapter 7 working principles. Furthermore, Chapter 11 should be amended to state that a double bubble curtain will be deployed to ensure that the approach is consistent between the chapters.

Consideration should be given to the use of Didson cameras (a high resolution acoustic camera which can be used underwater) to monitor the effectiveness of bubble screens to exclude fish. If this is feasible, it should be discussed further with MS-Science. Anecdotal evidence of dead salmon following blasting should be reported.

See also our comments in 3.5 above.

4.2 Lighting

There is no mention of lighting in the fish species protection plan nor of fish in the Construction lighting management plan (Chapter 5). It would be useful to clarify that lighting directed towards water, for instance on the breakwaters, should also be shielded where possible to reduce disturbance to fish.

5. Ythan estuary, Sands of Forvie and Meikle Loch SPA

While the CEMD includes many of the appropriate mitigation measures relating to eider duck of the Ythan SPA, they are not presented in a clear and accessible way. It may be useful for CEMD Chapter 9 - Habitat Management Plan and Otter Protection Plan to have included a list of these agreed mitigation measures, with indications of how they are being implemented during construction, and with links to appropriate sections of the CEMD where these measures are detailed.

In order to prevent an adverse effect on the integrity of this SPA we ask that the following points are addressed:

5.1 Breakwater construction.

This was specified as being required to start prior to the influx of moulting eider that begin to peak in numbers in June. Appendix 3 Enabling Works and Construction chart in Chapter 3 – Construction Method Statement states that blasting, drilling and dredging for breakwater construction will begin during July when peak numbers of moulting eider are likely to have established themselves in the Nigg Bay area. This does not comply with previously agreed mitigation for the AHEP.

5.2 Vessel routing plan.

We welcome the exclusion zone around Girdle Ness and Greyhope Bay but note that other than this, there does not seem to be evidence of a vessel routing plan to provide less disturbed areas for eider during construction. We recommend that vessels should follow similar routes/corridors as much as is practical to reduce disturbance across the site, especially during the period when eider are moulting and flightless, and consequently less able to avoid moving vessels.

5.3 Lighting strategy.

The Construction lighting management plan (Chapter 5) does not specify that the use of louvres or shields are required to avoid disturbance to eider. It would be useful to clarify that lighting directed towards water outside the main harbour, for instance on the breakwaters, should also be shielded where possible to reduce disturbance to eider and other birds on the water.

5.4 Access to breakwaters.

Although it is stated in 9.4.2.3 of the Habitat Management Plan (Chapter 9) that public access to the breakwaters will be prohibited to, it should be stated that the breakwaters will be fenced to prevent predation of eider and other species by terrestrial predators, such as foxes.

5.5 Reference to the Ythan SPA

There should be adequate reference to the Ythan SPA in the CEMD. For example, it should be included in the designated sites referred to in 9.31 of Chapter 9.

5.6 Eider monitoring

We have provided separate comments to ARUP on the draft eider monitoring plan and will provide comments on a more detailed proposal in due course.

6. Nigg Bay SSSI

The measures relating to this SSSI are contained in Chapter 16 of the CEMD. We welcome the amendments that have been made to protect the SSSI, such as the movement of the two temporary haul roads away from the top and bottom of the slope. We ask that the developer or landowner approaches us for SSSI consent for construction of the temporary haul road at the base of the cliff and the six cable percussive boreholes near the top of the slope.

In order to prevent an adverse effect on this SSSI we ask that the following points are addressed:

6.1 Southern Compound Area:

There is insufficient information to show that drainage from both construction and operation of the southern temporary compound will not adversely affect Nigg Bay SSSI. We support the information requested by SEPA in relation to the planning application for matters specified by conditions for this compound (8 March 2017). This information should be provided to the satisfaction of SEPA and incorporated into an amended CEMD.

6.2 Temporary haul road at toe of SSSI Slope.

We are content with the new route of the temporary haul road at the toe of the SSSI slope and with the drainage at foot of the slope (16.3.2) but request site management note any adverse changes.

6.3 Drawings and plans.

The boundary of the SSSI should be shown in the plans in the CEMD and provided to site contractors. We note also that the location of the proposed road differs in the drawing of the southern compound layout from that in Chapter 3, the CMS. We understand that the plan in the CMS is correct.

In addition, we would like clarification on the following points:

6.4 Temporary haul road in the southern compound area

The plan should state the type of traffic and use made of the road at the top of the cliff nearest to the SSSI.

6.5 Access to construction areas

It would be helpful if the routes and access points referred to in table 3.3 of the Construction Method Statement (Chapter 3) were shown on a map.

6.6 Six cable percussive boreholes

These will be made 5m from the top of the slope adjacent to the SSSI (16.3.1). We ask that any data or samples arising from the boreholes are retained for SNH and quaternary researchers to access. In particular we are interested to see how extensive are the strata that are exposed in the cliff of the SSSI.

6.7 Clearance of vegetation from the cliff

This would be beneficial for the SSSI, as compensation, to expose the layers of sediments of special interest in selected locations. We understand this could be carried out at the end of the use of the haul road along the base of the cliff. In addition, non-native invasive species of plants should be cleared from the SSSI. We wish to be contacted to discuss this towards the end of the project to agree the areas and methods and arrange SSSI consent.

7. Chapter 9 Habitat Management Plan and Otter Protection Plan

7.1 Schedule 1 birds

If the survey could involve disturbance to Schedule 1 birds, then a licence from us will be required. Further information is provided in the licensing section of our website:

<http://www.snh.gov.uk/protecting-scotlands-nature/species-licensing/bird-licensing/research/>

8. Chapter 12 Marine Invasive Non-Native Species Plan

We strongly recommend that non-native species are removed at source, before vessels travel to the UK. For the sake of clarity, we recommend that ballast water (and sediment in the tanks) is checked before leaving other ports and an external hull inspection is carried out.

Yours sincerely

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