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From: MS Major Projects
Sent: 04 April 2017 15:30
To: Ferguson V (Val)
Cc: Zoe Crutchfield (Zoe.Crutchfield@arup.com); Katherine Harris (K-Harris@aberdeen-harbour.co.uk); Bland M (Michael) (MARLAB)
Subject: 05964/05965 - Aberdeen Harbour Board - Aberdeen Harbour Expansion Project, Construction and Capital Dredging & Sea Disposal, Nigg Bay - CEMD - MS-LOT Comments
Attachments: AHEP - CEMD - Fish Species and Protection Plan - MSS comments.pdf; AHEP - CEMP - Construction Method Statement - MSS comments.pdf; AHEP - CEMP - Dredging and Disposal - MSS comments.pdf; AHEP - CEMP - Habitat Management Plan - MSS comments.pdf; AHEP - CEMP - Marine Mammal Mitigation Plan - MSS comments.pdf; AHEP - CEMP - Noise and Vibration Management Plan - MSS comments.pdf; AHEP - CEMP - Piling Management Plan - MSS comments.pdf; AHEP - CEMP - Vessel Management Plan - MSS comments.pdf; AHEP - CEMP - Marine invasive non-native species and biosecurity management plan - MSS comments.pdf; AHEP - CEMD - Existing abstractions and discharges - MSS comments.pdf

Dear Val,

Marine Scotland - Licensing Operations Team (MS-LOT) sought advice from Marine Scotland Science (MSS) on the various plans and have the following comments to make. The responses from MSS are attached for your information.

Ch. 3: Construction Method Statement (CMS)

On page 27, section 5.4.2 it is mentioned that, should it be required, the caissons may be temporarily stored in other marine areas. Please note that a marine licence will be required should such storage be necessary below MHWS.

During the determination stage, there was agreement that partial construction of breakwaters will take place prior to the occurrence of blasting activities. The timelines in Appendix 3 do not make this clear and therefore the chart should be updated to reflect that.

Ch. 7: Dredging and Dredge Spoil Disposal Management and Monitoring Plan

On page 7-30, section 7.5.1, it is mentioned that there are low levels of contaminants in the sediment and therefore 'no significant release of pollutants into the water column is anticipated to occur as a result of the dredging and disposal activities'. We note that the second set of sediment sampling results found exceedances above Action Level 1 and as such, we do not consider that the level of contamination should be classed as 'low'. No evidence has been provided to explain the statement that 'the residual effect of the operations is believed to be negligible'.

Section 7.5.2 states that 'based on the pre-dredge sampling results presented in the ES, all material is deemed to be suitable for disposal at sea, so elevated levels above Action Level 1 (AL1) and Action Level 2 (AL2) are not anticipated in the hopper samples'. We note that the sampling results presented in the ES were results based on surface grabs, which were deemed inadequate for basing our assessment on. The second borehole sampling campaign identified exceedances of AL1 and therefore it is possible that elevated levels above AL1 are seen in hopper samples.

Therefore there is a possibility that material above AL1 is disposed. As such it is not clear what actual management of such material is provided for in section 7.5.3 (Adaptive management). The presence of higher contaminant concentrations in specific locations, as identified in the sampling to support the application, is not accounted for in the present plan and no management for these locations is explained.

The CEMD should include measures that are in place in order to deal with material which is not suitable for sea disposal and outwith the OSPAR and London Conventions.

Also, please note that the same contaminants tested in the previous chemistry sampling campaigns, should also be tested during your monitoring works, including Tributyltin and Polychlorinated Biphenyls. Finally, the laboratory chosen for the analysis must meet the requirements set out in our Pre-disposal Sampling Guidance. We ask that AHB please, amend these sections to reflect these requirements.

The information recorded as per section 7.6.1 should also include if samples of the particular load have been taken for analysis.

Bathymetric surveys should also be reported to MS-LOT. Section 7.6.3 should be amended to include such provision in a manner that can be reviewed by a range of stakeholders.

Section 7.6.4 on page 7-35 should be amended to reflect the boreholes-based sampling results undertaken. Section 7.6.4 refers to adaptive management and as per comments for section 7.5.3, it is not clear what management is proposed if elevated contaminant levels are shown. Comparison of results from the hopper samples with those from the disposal site is not a suitable measure for adaptive management and any hopper sampling results exceeding AL1 should be reported to MS-LOT immediately with no further sea disposal taking place until approval is given by MS-LOT.

On page 7-34, section 7.6.3, it is mentioned that there will be two monthly bathymetric surveys conducted. We ask that you please provide us with access to the bathymetric survey results along with the data and reports on turbidity monitoring collected with the YSI instrument, as indicated on page 7-36, section 7.7.1. Section 7.7.2 refers to adaptive management where high levels of turbidity are recorded. The section does not clarify what such levels are, nor what actions will be taken should high levels arise. This should be addressed.

We also note that better cross referencing between this plan and the MMMP should be undertaken, especially around the bullet points in section 11.5.5 of the MMMP, which outline the conditions under which blasting can take place and the use of MMOs and PAM in the blasting process. The mitigation outlined in the MMMP should be used for all instances of blasting including test blasting.

Ch.8: Fish Species Protection Plan

The results from the monitoring intended to be undertaken in order to assess the effectiveness of the bubble curtains must be made available to MS-LOT in a short time frame.

Based on the attached MSS comments, AHB should explore further mitigation measures to avoid negative effects on diadromous fish species in the vicinity of blasting activity. Such measures could involve delaying blasting if salmon are spotted breaching and jumping, monitoring the effectiveness of bubble curtains as a measure of deterring salmon, reporting on salmon mortality and injury, the inclusion of a plan to amend works acidity if such mortality and behaviour occurs and notification of observations of such behaviours and activity and the action taken to MS-LOT.

Ch. 9: Habitat Management Plan & Otter Protection Plan

Reference is made in the introduction of this plan to a Marine Mammals Protection Plan (MMPP), which we understand to be the same as the Marine Mammal Mitigation Plan (MMMP) (Ch. 11).

We ask that AHB clarify whether marine species are intended to be included in this plan, as eider ducks and Atlantic salmon are, compared to bottlenose dolphins etc. If marine species should be included, then section 9.3.1 should include the Moray Firth SAC for bottlenose dolphins and section 9.3.2 should mention bottlenose dolphins too.

Appendix B should be updated to reflect the appointment of Dragados as the contractor and the document's dates should be amended to tie in with the date of the CEMD.

Ch. 11: Marine Mammal Mitigation Plan

On page 11-5, it is mentioned that MMO logs will be submitted to JNCC. These logs and records of activities should also be submitted to MS-LOT.

We welcome the flow diagram produced for the dredging mitigation process (section 11.7.3) and ask that a similar one is produced for the process of communication between the MMOs and the blast master.

On page 11-11, section 11.9, it is mentioned that 'the bubble curtain will be installed so that there is no direct line of sight between the blasting area and open water'. Please note that the use of bubble curtains should not negate the use of partially or fully constructed breakwaters for achieving the 'no direct line of sight' rule.

AHB and their consultants should take advice from the hydrophone manufacturers on required sensitivity and gain settings. There is a risk that near-source recordings could damage the recorders if they are too sensitive. Far field recorders may require different settings to those used in the near field.

A clearer figure showing the indicative location of the bubble curtain is requested to replace the one on page 11-12 (Figure 3).

We note that the deployment of CPODs to understand the difference in dolphin and porpoise presence at the site during construction works has not been included in the plan, although previously discussed. Can AHB please clarify the reason for exclusion from the plan and whether this would be put into place should there be a studentship. A dialogue on the experimental design for this is also welcome.

Ch. 12: Marine Invasive Non-Native Species and Biosecurity Management Plan

Please note that the correct and accepted scientific names for the red alga and acorn barnacle referred to in section 12.3.1 are now *Dasysiphonia japonica* and *Austrominius modestus*, so this text should be updated accordingly.

Ch. 13: Noise & Vibration Management Plan

As this document appears to represent terrestrial noise and vibration monitoring and reporting, MS-LOT has no comments to make.

Ch. 14: Piling Management Plan

Please note that this plan should have better cross referencing to and include elements of the MMMP, where they fit into the process defined for piling.

AHB must provide records of piling activity undertaken in the marine environment, at a minimum comprising of the date and time, location, and nature of the piling works, to MS-LOT.

Ch. 17: Vessel Management Plan

We note it is appropriate for vessels to follow the Scottish Marine Wildlife Watching Code when operating around marine mammals and ask that vessels keep a watch for them, in order to ensure that they are able to behave appropriately if the animals are around. Monitoring data presented in the ES demonstrated that dolphins were regularly present at the site, therefore vessels have to become familiar with the behaviour standards expected.

Ch. 19: Existing Abstractions & Discharges

Can AHB please clarify whether the second paragraph in section 1.2, on page 19-1, refers to a temporary MS intake construction or a permanent, one as the wording is not clear.

Please note we require better cross referencing to be undertaken between the plans, as the way in which they link together is not well communicated at present.

We also note that an EPS licence application is yet to be received. Works cannot commence unless a valid EPS licence is in place.

Please note that we have no comments on the following:

- Environmental Plan
- Ch. 1 & 2: AHEP CEMD Upfront Text
- Ch. 4: Archaeology Plan
- Ch. 5: Lighting Management Plan

- Ch. 6: Construction Traffic Management Plan
- Ch. 10: Landscape Mitigation and Compensation Plan
- Ch. 15: Pollution Prevention Plan
- Ch. 16: Nigg Bay SSSI Management Plan
- Ch. 18: Waste Management Plan

Should you have any further queries, please do not hesitate to contact us.

Kind Regards,

Rania Sermpezi
Marine Licensing Casework Officer

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