



ABERDEEN HARBOUR  
EXPANSION PROJECT  
*November 2015*

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Technical  
Appendices*

## APPENDIX 1-D SCOPING OPINION 2014





Ms Katharine Blythe  
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EH6 6JH.

10 January 2014

Dear Ms Blythe

## **PROPOSED DEVELOPMENT AT ABERDEEN HARBOUR – HARBOUR REVISION ORDER, MARINE LICENCE AND PLANNING PERMISSION – EIA SCOPING REQUEST**

### **1. Introduction**

Thank you for your letter of 3 July 2013 indicating that proposed works at Aberdeen Harbour will be authorised by a Harbour Revision Order (HRO) under Section 16 of the Harbours Act 1964, Marine Licence under Part IV of The Marine (Scotland) Act 2010 and Planning Permission under the Town and Country Planning (Scotland) Act 1997 as amended. In this connection you have requested a screening opinion for proposed works at the harbour.

### **2. Harbours Act 1964**

Where Scottish Ministers are notified of a proposed HRO which authorises a project they are required in terms of paragraph 4 of Part 1 of Schedule 3 to the 1964 Act to decide

- (i) whether that application relates to a project which falls within Annex I or Annex II to Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment (as amended by Council Directives 97/11/EC and 2003/35/EC) (“the Directive”) and
- (ii) if it relates to a project which falls within Annex II, whether taking into account the selection criteria, the project is a relevant project.

Ministers are also required to decide whether the project is likely to have a significant effect on a European site and if so whether an appropriate assessment is required in terms of regulation 48 of the Conservation (Natural Habitats & Etc) Regulations 1994.

The Scottish Ministers have considered the characteristics of the project (as described and shown on the draft submitted plans and drawings) and have concluded that:

- (i) the application falls within paragraph 8 of Annex I to Council Directive 85/337/EEC, due to the nature and scale of the proposed works at the harbour.

Accordingly an Environmental Statement is required in terms of the 1964 Act.

### 3. Scoping

The applicants have requested a scoping opinion under the Harbours Act 1964, the Marine Works (Environmental Impact Assessment) Regulations 2007 and the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011. This letter comprises the requested scoping opinion, and sets out the extent of the information (referred to in Annex IV to the Directive) which would be required to be supplied in the Environmental Statement. This scoping opinion is provided on behalf of Scottish Ministers (Transport Scotland and Marine Scotland) and Aberdeen City Council<sup>1</sup>.

Transport Scotland, on behalf of these organisations, has consulted with the relevant environmental bodies about the extent of the information the applicants should supply in the Environmental Statement<sup>2</sup>. Having carefully considered the views of the applicants, Scottish Natural Heritage (SNH), Scottish Environment Protection Agency (SEPA), Historic Scotland and Aberdeen City Council, the Scottish Ministers and Aberdeen City Council have determined that the scope of the proposed Environmental Statement as indicated in the scoping report provided by the applicant is mostly sufficient, but will need to be clarified in certain areas. The applicants' attention is drawn to the specific issues raised in this letter (see **Annexes 1, 2 and 3**) and they are requested to act accordingly.

### 4. Conclusion

We trust that you will be able to address these matters before submitting your formal harbour revision order and applications for planning permission and the marine licence. It would of course be open to the environmental bodies to object to these applications for consent if they still have concerns when the applications are presented.

I hope this is helpful. Please do not hesitate to contact me if you wish to discuss any aspect of this letter or the application process. I would encourage you and the applicants to make early contact regarding preparation of the draft order and look forward to considering your draft order informally in due course.

Yours sincerely

**NICK GOSLING**

Ports and Harbours Branch

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<sup>1</sup> For the avoidance of doubt, this scoping opinion therefore is provided in accordance with the requirements of the Harbours Act 1964, the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011, and the Marine Works (Environmental Impact Assessment) Regulations 2007.

<sup>2</sup> Marine Scotland will consult navigational consultees, the Maritime and Coastguard Agency and the Northern Lighthouse Board as part of the marine licensing process.

## **ANNEX 1: GENERAL COMMENTS:**

(SNH) – Scottish Natural Heritage

(SEPA) – Scottish Environment Protection Agency

(ACC) – Aberdeen City Council

(DDSF) - Dee District Salmon Fishery Board

(MCA) - Maritime and Coastguard Agency

(MS) – Marine Scotland

(NLB) - Northern Lighthouse Board

(RYA) - Royal Yachting Association Scotland

(RSPB) – Royal Society for the Protection of Birds

(SFF) - Scottish Fisherman's Federation

(WDCS) - Whale & Dolphin Conservation Society

(HS) – Historic Scotland

(TS) - Transport Scotland - Truck Road and Bus Operations

(MS)

The Marine Scotland-Licensing Operations Team (MS-LOT) administers the licensing function under Part IV of the Marine (Scotland) Act 2010 (the Act) on behalf of the Scottish Ministers. Under the Act the following are examples of “licensable marine activity”:

- To scuttle any vessel or floating container in the Scottish marine area;
- To deposit or use any explosive substance or article within the Scottish marine area either in the sea or on or under the seabed;
- To deposit any substance or object within the Scottish marine area, either in the sea or on or under the seabed, from a vehicle, vessel, aircraft, marine structure or a container floating in the sea;
- To construct, alter or improve any works within the Scottish marine area either in or over the sea, or on or under the seabed;
- To use a vehicle, vessel, aircraft, marine structure or floating container to remove any substance or object from the seabed within the Scottish marine area;
- To carry out any form of dredging within the Scottish marine area (whether or not involving the removal of any material from the sea or seabed).

The following activities described in the Scoping Report by RPS are therefore considered to require a marine licence:

- All deposits below Mean High Water Springs (MHWS)
- All construction below MHWS,
- Use of explosives below MHWS
- All dredging and sediment removal below MHWS
- All disposal of dredge spoil below MHWS

(HS)

In terms of geophysical scanning of the seabed the applicant may wish to refer to Marine Geophysics Data Acquisition, Processing and Interpretation published by English Heritage and if necessary adopt a protocol for archaeological discovery during construction. The Marine Geophysics Guidance Note can be downloaded from [www.english-heritage.org.uk/publications/marine-geophysics-data-acquisition-processing-interpretation/MGDAPAI-guidance-notes.pdf](http://www.english-heritage.org.uk/publications/marine-geophysics-data-acquisition-processing-interpretation/MGDAPAI-guidance-notes.pdf).

When carrying out the assessment we would advise the applicant to refer to Historic Scotland's Managing Change Guidance Note on Setting which can be downloaded from [www.historic-scotland.gov.uk/setting-2.pdf](http://www.historic-scotland.gov.uk/setting-2.pdf).

(MS)

The consultation responses raise various matters that must be addressed in the compilation of the final ES for submission. A table summarising specific points for inclusion is attached (**Annex 3**). The developer should complete the table and append to the final ES. Please note that additional advice to aid the production of the final ES is contained within the consultation responses, and copies are attached in full for reference.

In order to ensure that the ES meets the requirements of the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended), the applicants should be made fully aware of Schedule 3 of the above legislation which details the information to be included in the ES. Where consultees have requested assessment and survey this has been made clear in the comments. Should the applicant be in anyway unclear of the requirements for survey and assessment they are strongly advised to contact the competent authorities to clarify the requirements.

(NLB)

On receipt of any Harbour Revision Order and application for a marine licence under Part IV of the Marine (Scotland) Act 2010 for aspects of the development that will extend beyond Mean Low Water Springs (MLWS) – i.e. dredging, disposal and marine construction works, Northern Lighthouse Board will make full comment on the provision of Aids to Navigation and any impact the development may have on the Safety of Navigation.

### **General Approach**

(SNH)

The draft framework for NPF3 includes the expansion of Aberdeen harbour as a National Development but indicative maps show this as within the existing harbour confines. The maps and text of NPF3 should therefore be amended to show that the expansion is proposed in Nigg bay. This should help ensure the Nigg proposal is clearly acknowledged as this National Development.

The scoping report identifies a number of indicative temporary construction areas, which it says will be taken forward through a separate consent. Two of these are on land and a third is in the sea. While temporary, these construction areas are essential for the development to proceed. We advise that the site application boundary should be widened to include all temporary construction areas. The environmental impacts of their development, use and restoration, should be considered in the EIA as part of the development as a whole. This approach was discussed and agreed at the environmental workshop on 29th May. It is also consistent with the advice given in the combined pre-screening comments by the Aberdeen harbour expansion advisory group.

We recommend the EIA makes reference to previous studies and methods used at the current harbour. It would be helpful to incorporate a 'lessons learned' review of what happened during the various works over the last few years.

The ES will need to consider appropriate mitigation and a detailed Construction Environmental Management Plan should be produced to accompany the application. It should set out, as far as possible, the likely times of year and duration of the various construction activities. For some species, the time of year when works are carried out can be a useful form of mitigation.

(SEPA)

Details of regulatory requirements and good practice advice for the applicant can be found on our website at [www.sepa.org.uk/planning.aspx](http://www.sepa.org.uk/planning.aspx). If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the operations team in your local SEPA office at: Inverdee House, Baxter Street, Torry, Aberdeen, AB11 9QA; tel: 01224 266600

(MCA)

MCA would expect a review of the Navigational Risk Assessment to be included in the ES. This would be in accordance with the requirements of the Port Marine Safety Code.

## **ANNEX 2: SPECIFIC COMMENTS**

(SNH)

### **1. Natura: Habitats Regulations Appraisal & European Protected Species**

A Habitats Regulations Appraisal (HRA) will be required to assess the impact of the proposal on Natura sites. Please note that an HRA will be required for each of the consenting regimes for the proposal. Consequently Transport Scotland, Marine Scotland, and Aberdeen City Council will all be competent authorities (CAs). This will be the case even if there is a single HRA to cover all three consents. We therefore recommend that this is an inclusive process to which all the CAs are signed up.

We recommend that the ES includes adequate information to inform the HRA. We suggest this is included in the ES as a separate chapter as this will make it easier for the CAs to complete the appropriate assessment.

We provide advice on the information to inform an HRA for this project in Annex B. We would be happy to review the scope and drafts of this information before the ES is finalised. This might help ensure it sufficiently addresses all relevant impacts and conservation objectives. It would also help avoid delays that can result if the applicant is required to carry out further assessment after the application has been submitted.

There should also be consideration of European Protected Species (EPS) legislation. It is likely that an EPS licence will be required for cetaceans.

### **2. Oceanography**

(MS)

The construction of this harbour extension will have effects on the local wave regime, the water circulation, the sediment transport and coastal processes.

### **3. Hydro-dynamics, Sediments and Coastal Processes**

(MS)

Section 5.35 mentions Hydrodynamics, Sediments and Coastal processes. It is proposed to undertake a hydrodynamic modelling study to demonstrate the extent of any potential impacts and MS fully supports this approach. The proposed simulated coastal processes will include waves, tides, littoral currents and sediment transport (with and without the proposed development). All of these aspects need to be modelled and evaluated in great detail.

The model domain should be larger than Nigg Bay. The developer must consult with Marine Scotland in relation to this once more detail is known about different model runs. This will ensure that the boundaries of the domain are appropriate.

(SNH)

The report states clearly what work is planned to predict and potentially mitigate any impacts. SNH agree with the aspects scoped in and the proposed investigations seem considered and appropriate. The modelling approach (sections 5.62-78) should provide a sound understanding of the potential impacts.

SNH recommend that the impact of the sedimentation south of the southern breakwater, identified in section 5.56, is considered.

SNH do not anticipate any significant connections with developments on adjacent shorelines which would give rise to cumulative impacts.

Please note that the term 'Marine Conservation Zone' is being used by England and Wales. In Scottish waters, Marine Protection Areas is the term being used. However, the closest such areas are the Southern Trench and Turbot Bank which would not be affected by this proposal.

#### Nigg Bay SSSI

SNH agree with management objective and potential impacts identified for Nigg Bay SSSI. The specific issue is how the development could change coastal erosion processes, and therefore the stability, survival and accessibility of the coastal cliff exposures. SNH support the use of a hydrodynamic study to investigate how the proposal might alter erosive processes at the base of the cliff.

Section 5.53 states that "Preliminary desk assessments suggest that the waves will try to straighten the beach out by pushing sediment from south to north. This could lead to some erosion on the southern side of the beach (below the SSSI) and minor depositions on the northern part of the remaining beach." It is technically correct that the MLWS is the designated boundary, but if it erodes the subtidal beach face then it affects the designated site in the same way.

SNH note there is a potential for direct impacts to Nigg Bay SSSI during temporary construction works (section 5.59). As mentioned above under 'General Approach', SNH consider it important that the temporary construction areas are included in the EIA.  
(MS)

**5.62** "Refinement of the proposed harbour and breakwater layout to maximise the benefit and minimize and adverse impact of the proposed development" – It is crucial to find the best possible design especially when analysing prevailing wind and wave direction. Different options should be presented and your attention is drawn to Schedule 3 of the Marine Works (Environmental Impact Assessment) Regulations 2007 and in particular part 6 which requires the inclusion of 'An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects of those alternatives and the project as proposed'.

The initial dredging consists of 2 000 000 m<sup>3</sup> of material and a description of its use would be helpful. This is information that must be included in the Best Practicable Environmental Option Document Submission of this is required prior to the licensing of any disposal of dredged material at sea. Disposal modelling will be required depending on the volume and disposal location and when more details are known, Marine Scotland should be consulted to discuss potential modelling requirements.

#### **4. Marine Fish and Commercial Fish**

(MS)

**4.18** In the Cumulative and Combined Effects section, we would recommend that the Beatrice Offshore Wind Farm (BOWL) is also taken into consideration.

Although there may be small aggregations of sandeels, any impacts to these are unlikely to be significant at the population level. These may, however, be important for local birds and this must be considered.

Fisheries consultation in relation to creel fishing for crab and lobster as well as consideration given to restrictions to vessel traffic during construction will be required and documented in the ES. Scotmap data maps can be found at <http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/ScotMap> and MSS can provide vms data maps but direct consultation should be sought to ensure all parties have been considered.



(SFF)

Having reviewed the document, the SFF would suggest that with regard to the Cumulative and Combined effects on page 18 and para 4.18, MORL Windfarm is superseded by the Moray Firth Offshore Wind Developers Group, and there will also be a need to assess the possible addition of the Hywind project in the Buchan Deeps.

## 5. Diadromous Fish

(DDSF)

The proposal is located adjacent to the main stem of the River Dee and is on a direct migration pathway for Atlantic salmon. The Dee has been designated as a Special Area of Conservation under the EC Habitats Directive 92/43 EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna, for Atlantic salmon, Freshwater Pearl Mussels and Otters. Please note that in terms of this legislation the Dee DSFB is a competent authority on developments that may impact upon Atlantic salmon.

Sea lamprey are a migratory species that spend their juvenile phase in freshwater and their adult phase in the marine environment before returning to freshwater to spawn. The migratory pathways and feeding locales of sea lamprey are not known and may coincide with the proposed development. Sea lamprey are designated under Annex II of the EU Habitats Directive Appendix III of the Bern Convention and are also on the UKBAP Priority List.

River lamprey have a similar life strategy as Sea lamprey and also frequent the Dee. The main difference between the two species is that the marine phase of their lifecycle is known to be coastal. As such there is a greater risk of interaction with this species during the construction and operational phase of the development. River lamprey are also designated under Annex II of the EU Habitats Directive Appendix III of the Bern Convention and are also on the UKBAP Priority List.

Eels are an integral part of the fauna within the River Dee. Eels are also a migratory species but differ to salmon in that they spawn at sea and live in freshwater before returning to the sea to complete their lifecycle. Due to the rapid decline in eel numbers all European states are required to have an Eel Recovery Plan (Council Regulation No 1100/2007) and the development must take into account Scotland's Eel Management Plan. In addition eels are on the UKBAP Priority Species list.

Sea trout, the migratory form of *Salmo trutta* are present within the proposed development area and utilize the habitat as both a migratory pathway and feeding area. Sea trout are currently designated as a priority species under the UK Biodiversity Action Plan.

Dee District Salmon Fishery Board believe the issues that require the greatest level of detail relate to Atlantic salmon due to the designation of the Dee as a Special Area of Conservation.

The environmental statement (ES) must incorporate and detail, where risks to damage to fish populations have been highlighted, the appropriate mitigation or environmental offset that will be employed in the development plans in terms of the species, particular life stage and stock component.

The ES must consider both the economic and conservation value of the species detailed in this response. As part of this a public relations strategy should be included as this may help offset some of the possible negative impacts of the development.

As this proposal is on the path of returning Atlantic salmon the key issue to understand the impact that this development will have is to understand the migration patterns of departing and returning Atlantic salmon. The Dee DSFB and River Dee Trust would welcome the opportunity to discuss this in greater detail with the developer.

(MS)

Marine works have the potential to directly and indirectly impact diadromous fish including Atlantic salmon, anadromous brown trout (sea trout), European eel, and river and sea lamprey and any associated fisheries. These species use the coastal areas around Scotland for feeding and migration and are of high economic and conservation value. As such they need to be considered during the EIA process.

The diadromous fish species are correctly identified in the report (**5.101-5.103**). The developer must provide an overview of the use or likely use of the proposed development area by salmon, sea trout and eels. The overview should include the times of year species are present and whether their presence is transient or longer term and also whether it is for feeding or migration. In the case of salmon and sea trout information relating to the origin / likely origin and destination of fish using the area, and whether any net fisheries are present should also be presented. For example, the River Dee which is close to the proposed development has important populations of salmon and sea trout. Adult salmon return to Scotland from a North West direction. However many of those returning to Scottish east coast rivers including the River Dee appear to move in towards the coast south of this area then move north to their natal river. Many adult salmon returning to the River Dee would therefore be expected to pass through Nigg Bay and salmon from other rivers would also be expected there. Sea trout often use coastal areas for feeding and would be expected to use Nigg Bay. A few years ago Marine Scotland Science carried out a review of migratory routes and behaviour for Atlantic salmon, sea trout and eels relevant to Scotland, which should be used in the ES. The review is available from <http://www.scotland.gov.uk/Resource/Doc/295194/0111162.pdf>. Marine Scotland would welcome the opportunity to provide comment on assembled information at the draft stage prior to completion of the ES.

We note that a desk study (**5.109**) and field sampling (**5.11**) are proposed which will or may respectively produce relevant information. We also note (**5.103**) that further consultation and surveys will be undertaken to determine presence and abundance of salmon in the area and how they may be impacted by the development. It is unclear from the wording whether the proposed surveys and consultation will cover the development area or the Dee SAC and this requires clarification with Marine Scotland Science prior to surveys commencing. We note that "Where desk based studies and consultations with key stakeholders indicate the need for surveys, they will be agreed with Marine Scotland prior to commencement." Marine Scotland looks forward to any such discussions and emphasises the importance of consulting with us prior to starting any surveys identified by this approach. In the case of any field sampling, the developer will need to ensure that legal requirements are met to allow any salmon or sea trout to be handled. The developer should also be aware that field

sampling of salmon from an SAC may require an Appropriate Assessment (AA), SNH will be able to advise.

The main factors in this development which could impact on diadromous fish in or in the vicinity of the works during construction and operation, and (if relevant) decommissioning phases, through injury, disturbance, avoidance, disorientation or delayed migration which could affect behaviour, susceptibility to predation or by-catch, availability of prey, ability to locate normal feeding grounds or river of origin, are construction of breakwaters, quays and berths, and dredging; the associated noise and vibration, changes in water quality, and loss of or creation of habitat; increased ship traffic during construction and operation and associated noise and vibration, or propeller or other impacts. Any possibility of direct interference with any salmon and sea trout net fisheries should also be discussed. Most of these are listed in **5.98** and **5.105-5.106** in the report. They will require full consideration

The local Dee District Salmon Fishery Board (DSFB) and The Dee Trust ([www.riverdee.org.uk](http://www.riverdee.org.uk)) should be consulted and will be able to provide useful information in relation to many of the issues raised in the preceding paragraphs.

Regarding noise, SNH commissioned a review of the potential impacts of EMF and noise on migratory fish which is available at: [www.snh.org.uk/pdfs/publications/commissioned\\_reports/401.pdf](http://www.snh.org.uk/pdfs/publications/commissioned_reports/401.pdf). We would also draw the attention of the developer to Gill A. B., Bartlett M. and Thomsen F. (2012) Potential interactions between diadromous fishes of U.K. conservation importance and the electromagnetic fields and subsea noise from marine renewable energy. *Journal of Fish Biology* 81, 664–695 doi:10.1111/j.1095-8649.2012.03374.x, with Corrigendum in *Journal of Fish Biology* (2012) 81, 1791 doi:10.1111/j.1095-8649.2012.03450.x, available online at [www.wileyonlinelibrary.com](http://www.wileyonlinelibrary.com). Only the noise sections of these reports will be relevant.

If any significant effects on salmon populations are anticipated, information will be required to assess whether there is likely to be any significant effect of developments on any rivers which are classified as Special Areas of Conservation (SACs) for Atlantic salmon under the Habitats Directive. The River Dee will certainly need included for HRA consideration with respect to its salmon population, but the developers should also note that marine developments have the potential to impact on migratory fish populations at substantial distances from the development site. Once such information has been assembled, other rivers to be included can be established following consultation with MS and input from SNH. Where there is the potential for significant impact, then sufficient information will be required to allow Marine Scotland to carry out a Habitats Regulations Appraisal (HRA) including AA as necessary and MS and SNH will also be able to provide guidance in relation to suitable AA material.

The developer will need to consider whether any mitigation measures or monitoring is required in respect of diadromous fish and the factors which potentially affect them, and whether there is any potential for cumulative impacts both from other local developments and those further afield including the N-RIP developments in the Moray Firth.

The developer must consider cumulative effects of other proposals in the planning or construction phase in order for the regulators to carry out assessment of in-combination effects in any Appropriate Assessment that may be required. With respect to the latter, we note that there is a useful section (4.18) in the report.

## **6. Benthic Ecology**

(MS)

Species introduced by the discharge of ballast water and the provision of hard substrate will not necessarily be exclusively 'non-native'. The ES should consider the potential impacts of all species introductions.

MS welcome the inclusion of intertidal and subtidal surveys to provide a complete baseline understanding. MS note the intention to agree survey scope and methodology with Marine Scotland and look forward to these discussions. Such discussions should occur prior to surveys being carried out.

The terms “in the immediate vicinity” (**Section 5.116**) and “split level cores” (section 5.120) require clarification with Marine Scotland prior to submission of the ES.

(SNH)

#### Approach and Methodology

Care should be taken over identifying the presence and extent of any PMFs. Grab samples are proposed but could potentially damage sensitive features. Grab sampling locations should be informed by the results of the geophysical survey and any visual surveys undertaken.

### **7. Marine Mammals**

(WDCS)

WDC has serious concerns about the effect of construction and operation of the proposed harbour extension on marine mammals, especially bottlenose dolphins. Connectivity of bottlenose dolphins between the Moray Firth Special Area of Conservation (SAC) and Aberdeen Harbour has been well documented e.g. Weir et al. (2006) and Cheney et al. (2013).

Our main concerns are that there will be a significant effect on marine mammals due to underwater noise from pile driving and dredging, and increased vessel traffic during construction and operation.

Aberdeen Harbour is an important area for bottlenose dolphins to forage. A recent study by Pirotta et al. (2013) found that bottlenose dolphins left Aberdeen harbour for five weeks whilst dredging activity occurred in the area. Although the timing of work has not been documented in the Scoping Report, construction of AHD will exceed five weeks, and is likely to cause a significant effect on animals in the area.

Alternative methods to pile driving should be investigated to reduce noise impacts. If pile driving is used, a noise-reducing barrier (such as a bubble curtain) should be maintained around the source to mitigate the impacts of radiated noise levels. The barrier should remain in place until piling has been completed.

The Marine Mammal Protection Plan (MMPP) should be developed in consultation with scientists with expertise in the Natura species to ensure that monitoring of the bottlenose dolphin, and grey and harbour seal SAC populations contribute to existing monitoring studies, to understand how bottlenose dolphins and seals use the area and to assess any changes to site use, and are appropriate to the level of works. WDC would like the opportunity to be part of the team that develops the MMPP.

Due to the vast quantity of proposed and consented activity on the east coast of Scotland, we have concerns about the cumulative impacts of all the developments that may occur in the area. When assessing the cumulative impacts, AHD will need to account for all developments within the known range of each marine mammal species.

#### Specific comments

Section 4.33: Scottish Dolphin Centre (SDC) should be changed to Whale and Dolphin Conservation (WDC, formerly WDCS). The SDC is one of WDC's outreach centres, located in the Moray Firth.

Section 5.31: Land-based and occasional boat-based dolphin watching in Aberdeen Harbour is a well documented tourist attraction in Aberdeen (e.g. <http://www.bbc.co.uk/news/uk-scotland-north-east-orkney-shetland-22365407>). Dolphin watching should therefore be added to the section 'Tourism and Recreation Impacts'.

Section 5.129: WDC would to be involved in the scope and methodologies of the surveys.

Section 5.130: Whilst we agree that surveys can be conducted in conjunction, the sea bird and marine mammal surveys should have their own dedicated observers. Marine mammal observers should be from a JNCC accredited source and there should be enough of them to work continuously without tiring.

Section 5.131 Passive acoustic monitoring (PAM) should be conducted in parallel to visual observations at all times.

WDC welcomes the Environmental Statement and Environmental Impact Assessment including proposed mitigation methods to reduce the impact of AHD on marine mammals.

#### References

Cheney, B., Thompson, P.M., Ingram, S.N., Hammond, P.S., Stevick, P.T., Durban, J.W., Culloch, R.M., Elwen, S.H., Mandlebreg, L., Janik, V.M., Quick, N.J., Islas-Villanueva, V., Robinson, K.P., Costa, M., Einfeld, S.M., Walters, A., Phillips, C., Weir, C.R., Evans, P.G.H., Anderwald, P., Reid, R.J., Reid, J.B. Wilson, B. 2013. Integrating multiple data sources to assess the distribution and abundance of bottlenose dolphins *Tursiops truncatus* in Scottish waters. *Mammal Review* 43: 71-88.

Pirotta, E., Laesser, B.E., Hardaker, A., Riddoch, N., Marcoux, M., Lusseau, D. 2013. Dredging displaces bottlenose dolphins from an urbanised foraging patch. *Marine Pollution Bulletin*. Available at <http://dx.doi.org/10.1016/j.marpolbul.2013.06.020>

Weir, C.R., Canning, S., Hepworth, K., Sim, I., Stockin, K.A. 2008. A long-term opportunistic photo-identification study of bottlenose dolphins (*Tursiops truncatus*) off Aberdeen, United Kingdom: conservation value and limitations. *Aquatic Mammals* 34: 436-447.

(RSPB)

**With regards to marine mammals and cetaceans such as harbour porpoise and bottlenose dolphin it is essential that the EIA includes adequate survey for these species to assess any potential issues.**

(MS)

MS agree with the species and potential impacts that have been scoped in at this stage. MS advise that it is necessary to carry out noise propagation modelling, in particular with regard to piling noise, in order to properly assess the impacts on marine mammals. The developer should consider whether any suitable alternatives to piling exist and if not,

whether there are piling methods which might create lower noise emissions and list all suitable mitigation.

MS would add that all cetacean species are European Protected Species and it is therefore an offence to disturb them. This will clearly have implications for activities such as piling and the developer should apply for an EPS licence for this.

Any impacts on seals should be put into the context of the Potential Biological Removal (PBR) for the region. For this development, the PBR for grey seals this year is 314 and for harbour seals is 2. These values are updated annually, but it is unlikely that they will change markedly from year to year.

MS consider that the bottlenose dolphins using the east coast of Scotland are a single population and therefore MS believe that potential impacts in the area around the Aberdeen Harbour development must be assessed with respect to the Moray Firth SAC. The 'Cumulative Impacts' section (4.18) lists a number of projects for consideration and states that the list will be developed and updated throughout the EIA process and agreed with relevant authorities prior to the submission of the application for AHD. MS agree with this approach and emphasise the requirement to take into account the whole East Coast area when considering which projects should be included.

MS look forward to being consulted on the plans for collection of marine mammal data in Nigg Bay.

(SNH)

#### Potential effects

The main issue highlighted in the report is disturbance. SNH advise that consideration also needs to be given to the impacts of pollution and displacement and also the potential for injury or death. These could arise from both construction and operation of the harbour. The potential causes of this are underwater noise and collision with vessels (construction and operation). The assessment of underwater noise must also consider impacts from drilling and blasting (including multiple charges) as well as piling.

#### Underwater Noise

SNH note that the assessment of underwater noise will be reported in the Marine Ecology chapter. It is important that the assessment considers the impacts of blasting and drilling noise on marine mammals and fish, as well as from piling, or other activities.

The assessment should take into account the likely behaviour responses of relevant fish. Not all fish will flee in response to underwater noise, for example, some might bury themselves in the sea bed. The assessment should focus on, but not be exclusive to, species with the highest expected sensitivities to underwater noise (e.g, herring, cod). It should also focus on Atlantic salmon, as they are a feature of the River Dee SAC, which is very close to the development area.

If multiple blasts would be used in quick succession, the interaction between the blasts and cumulative impact should be assessed. If the applicant encounters difficulties with this assessment, MS ask that they contact us to discuss how to address this matter.

Ideally there should be a baseline to run the model against. There is data from around the UK (and potentially from Aberdeen) on background noise levels that could be used to give an indication.

Please note that sandeels (5.102) are important for marine mammals as well as seabirds.

(SNH)

#### Approach and methodology

Section 5.128 suggests wider studies to “establish possible connectivity” to SACs. For bottlenose dolphin this is not required as it has been already proven and accepted.

Grey seals occur throughout Scottish waters. Analysis of seal telemetry data by SMRU (SNH Commissioned Report 441: Utilisation of space by grey and harbour seals in the Pentland Firth and Orkney waters 2011) has shown that grey seals tagged in both the Isle of May SAC and Berwickshire and North Northumberland Coast SAC appear to routinely travel past Aberdeen (through the proposed location) on their way to the Pentland Firth. The proportion of the SAC populations that travels in this way is not known nor how long they remain in this area for.

The telemetry study showed that harbour seals tend to be more limited in their movements (foraging distances - approx 50km) than grey seals and stay in the same area. The Firth of Tay and Eden Estuary SAC is approximately 80km from the development site and would normally be considered outwith ‘normal’ harbour seal foraging range. It would therefore be exceptional that harbour seals found in the vicinity of the proposed windfarm are from either this SAC or the Dornoch Firth SAC - the two closest harbour seal SACs. However, this subject is being reviewed as more information becomes available on the harbour seal population and the causes of its decline. The applicant will need to provide evidence as to whether or not there is a likely significant effect and we are happy to assist with this.

Also for seals, the ES will need to assess any implications on the potential biological removal figure for the East coast management unit for both species (under the Marine (Scotland) Act).

(SNH)

For seals the ES needs to address the risk of corkscrew injuries occurring and whether this is a relevant issue for this site. In particular, it should consider the use of vessels with ducted propellers during construction and operation of the new harbour.

SNH have provided initial advice on the survey method for marine mammals and asked for a revised methodology for our comment. The desktop studies to be carried out should feed into the design of this survey.

Please note that marine mammals are priority marine features.

All cetaceans are EPS and consideration will need to be given to how the development complies with EPS legislation and whether any licences are required.

A detailed Construction Environmental Management Plan should be produced which should contain a marine mammal risk assessment (detailing MMO use, exclusion zones etc).

## **8. Marine Scotland Compliance – Aberdeen Fishery Office**

(MS)

Consideration must be given to the active lobster fishery around Nigg Bay operated by a number of small boats from Aberdeen and Cove bay that operate creels within the season.

There is a Brown Crab fishery operating out with Nigg Bay and although it may not be directly impacted by the proposed works, consideration must be given to the effects of construction traffic or increased marine traffic after construction is completed.

## **9. Marine Analytical Unit**

HMT Green Book is referenced. In addition, it would be valuable to consider the ‘*Additionality and Economic Impact Guidance Note*’ (Scottish Enterprise, 2008)  
The ES should clearly outline the assessment criteria for the Labour Market Catchment Area  
The ES should clearly outline the assessment criteria for the Tourism Study Area.

(SNH)

Tourism, Recreation and Land Use - SNH support the proposal to assess the wider impacts of the proposal on recreation and Aberdeen's green space network. In particular, to carry out a residential amenity study to consider impacts on the community at Torry.

(RYA)

Individual RYA members may use the bay for windsurfing or dinghy sailing. In RYA's response to the recent consultation on the Scottish Planning Policy, and consistent with moving towards a low carbon economy, RYA have drawn attention to the need to provide recreational opportunities close to where people live. Thus the EIA should identify the scale of existing recreational use of Nigg Bay for water sports and, if necessary, identify appropriate mitigation measures.

(MS)

The ES should clearly outline the definition of 'local' 'regional' and 'national' with regards to their estimated economic impacts.

Economic impacts should include the presentation of both GVA (Gross value added) and employment impacts. Such impacts should be shown as direct, indirect and induced.

Economic impacts should be shown as both gross and net. The latter should make reference to any deadweight as well as leakage and displacement effects.

The possibility for any cumulative impacts should be considered.

## **10. Environmental Impacts – Socio-economics**

(ACC)

Page 24 - section 5.17 - Land Use - makes reference to District Wildlife Sites within the Aberdeen Local Development Plan (ALDP) 2012. These designations no longer exist and are now called Local Nature Conservation Sites (LNCS). This paragraph should also make reference to the Site of Special Scientific Interest (SSSI) which is also noted within the ALDP.

(SFF)

More relevant and importantly to our sector, in Chapter 5 on Socio-economics page 24 para 5.20 speaks of "historical" fishing in the area, there should be access through Marine Scotland to the new Scotmap showing aggregated data in the inshore sector. The SFF can also, through its constituent members, confirm that there is fishing activity in the study area and we would seek to represent and protect our members in that area.

(ACC)

Page 25 - section 5.21 - Potential Effects - should also include potential loss (temporary or permanent) of educational aspects linked to the geological SSSI at Nigg Bay.

Page 25 - section 5.22 - Approach and Methodology - refers to 'professional judgement' being 'applied to determine the significance of any predicted residual effects'. Plus the assessments will 'focus on the potential impacts as identified above and will be predominantly qualitative in nature.' This is not clear enough in terms of the approach and methodology. How will judgement be applied? How will the qualitative information be gathered? Will questionnaires be used for example?

Page 26 - section 5.26 - states 'with respect to population effects and housing provision, impacts are not considered likely to be significant.' What is this statement based on? Where is the evidence to support this statement? Just one sentence or so would help here.

## **11. Environmental Impacts – Nature Conservation**

(ACC)

Page 34 - Section 5.93 - Local and National Designations - The Moray Firth Special Area of Conservation (SAC) should be included in this table as the qualifying species (bottlenose dolphins) are regularly found at the River Dee SAC. The Moray Firth SAC is a matter for consideration in the 2012 ALDP.

Page 34/35 - Table 5.4 - it is not clear why the nature conservation designations, LNCS, are not included in this table. They are mentioned in the preceding paragraph, section 5.93.



They are listed in section 5.95, however, it feels that they are being treated as an afterthought and perhaps not as important? They may be local designated sites, but they are designated sites for nature conservation nevertheless, and should be included in Table 5.4 giving their distances, size and conservation interests just like the other designations.

Page 36 - first paragraph under Biodiversity Action Plan (BAP) Habitats and Species - should be (NELBAP) as opposed to (LBAP).

Page 36 - Section 5.98 - sixth bullet - talks about direct loss of habitats from within the footprint etc. It should state that habitats could be lost from both terrestrial and marine environments.

(DDSF)

The Dee DSFB notes and agrees with the potential impacts detailed in Section 5.98 of the Scoping Report. For the sake of clarity the main issues relating to the fish species mentioned above are detailed.

#### *Construction Phase*

1. Direct and indirect impacts to fish migration or coastal habitat use through interruption or changes to coastal processes.
2. The effects of underwater noise and shock resulting from any construction work or pile driving. This should relate to altered fish behavior including both lethal and sub-lethal impacts to adult and juvenile fish.
3. The impact of the dredging regime on fish migration and habitat use in terms of disruption to normal geographic or temporal patterns.
4. Impacts from a reduction in water quality. This may occur either during the construction phase in terms of increased suspended solids, release of pollutants from machinery and vessels or altered drainage patterns.

#### *Operational Phase*

1. The impact of noise from vessels on the migration of fish for both seaward and river bound animals.
2. The impact of direct and indirect illumination on fish migration and habitat use.
3. The increase in vessel activity and biosecurity arrangements to prevent the introduction of non-native organisms with particular reference to *Gyrodactylus salaris*.
4. The re-routing of drainage patterns, such as sewage outfalls, on habitat use by fish with respect to feeding ground use.
5. Indirect impacts on salmon predation by alteration to behavior patterns by either themselves or their predators.

## **12. Marine Ecology – Fish and Shellfish**

(ACC)

Page 37 - Section 5.101 - Key Issues/ Baseline Overview - insert the word 'Local' after 'Scotland' - i.e. should say 'North East Scotland Local Biodiversity Action Plan'.

(SNH)

SNH advice primarily concerns fish and shellfish species on the recommended Priority Marine Features (PMF) list (1 <http://www.snh.gov.uk/docs/B1064114.pdf>) The Scottish Government is currently consulting on this list. Note that there are species of conservation

importance that do not appear on the PMF list, such as most other elasmobranch species, and these should not necessarily be excluded from consideration in the EIA.

For the sake of clarity, the table below shows which species SNH advise should be scoped into the EIA that we would provide advice on and the type of assessment required. For species where SNH haven't recommended a targeted survey, any observations made during other surveys (e.g. benthic) should be recorded and reported on within the ES.

Summary of initial SNH advice on fish and shellfish for the proposal. Species for which advice is provided by Marine Scotland-Science are listed in the text below. Key: **Yes** = **scope in**, with detailed assessment expected due to particular sensitivities and/or availability of data; **Yes** = **scope in**, but with acknowledgement that detail of assessment may be limited by knowledge of species distribution or sensitivity; **CIA** = **consider at cumulative level only**; **No** = **scope out**

Species	Interest? (and Lifecycle Stages of Concern)	Provision of advice	Scope In? (see key)	Additional field survey advised?	Comments
<b>Priority Marine Features (PMFs)</b>					
Atlantic salmon	PMF, Annex II and V of Habs Dir, UKBAP priority (multi-sea winter component), OSPAR	MSS, SNH	Yes	No	The <sup>1</sup> River Dee SAC is located in close proximity to the development area.
Sea Lamprey	PMF, Annex II of Habs Dir, UKBAP priority	SNH	Yes	No	There are records from the River Dee.
River Lamprey	PMF, Annex II and V of Habs Dir, UKBAP priority	SNH	Yes	No	River lamprey are predominantly an estuarine/freshwater species, but there are records from the River Dee, which is in very close proximity to the development area. Potential impacts should therefore be considered.
Sea trout	PMF, UKBAP priority	MSS, SNH	Yes	No	There are records from rivers in the area.
European eel	PMF, OSPAR, IUCN red list	MSS, SNH	Yes	No	There are records from rivers in the area.
Sparling	PMF, UKBAP priority, IUCN red list	SNH	No		
Shad (Allis and Twaite)	Annexes II and V of Habs Dir, Appendix III of Bern Convention, UKBAP Priority	SNH	No		
Atlantic herring	PMF (Juveniles and spawning adults), IUCN red list	MSS, SNH	Yes	Unlikely, but refer to MS-S	Spawning grounds may extend to nearshore area if substrate is suitable, but known spawning areas also likely to be within impact zone for underwater noise.
Sandeels	PMF, UKBAP priority,	MSS, SNH	Yes	Refer to MS-S	Some suitable sandeel habitat is likely to be present. The importance of the site for sandeels and their predators should be assessed.
Sand goby	PMF, Bern	SNH	CIA	No	Due to ubiquitous nature of species, impacts at this scale unlikely to be of concern, but consideration at the cumulative level has merit.
Basking shark	PMF, UKBAP priority, OSPAR, IUCN red list, Bern, W&CA.	SNH, MSS	Yes	Yes	Although not frequently sighted on this stretch of coast, disturbance and collision are possible. Any visual marine mammal surveys should aim to record any basking sharks. Requirements of the Wildlife and Countryside Act 1981 and the Wildlife and Natural Environment (WANE) (Scotland) Act to be met.
Common skate	PMF, UKBAP priority, OSPAR, IUCN red list	SNH, MSS	No	No	Although of conservation value due to UK-wide declines, common skate are unlikely to be common or important in the area.
European spiny lobster	PMF, UKBAP priority	MSS, SNH	No	No	This site is unlikely to be important for this species}

<sup>1</sup>Note that Atlantic salmon and sea trout are host species for freshwater pearl mussel. We are pleased that the scoping report states that effects on freshwater pearl mussel will be considered.

### Potential effects

The scoping report identifies most of the key potential impacts for fish and shellfish. We advise that the following possible impacts have either been omitted or not explained clearly and should also be addressed in the ES:

- Habitat loss and disturbance from construction activities and the presence of the development.
- Habitat and substrate-type change from the presence of the development and associated changes in fish and shellfish communities.
- Increased suspended sediment concentrations during development, subsequent maintenance of dredged channels and from propeller wash. The associated settlement of this material and potential smothering of fish, shellfish and associated habitats should be assessed.
- Risk of contamination/pollution from on-site storage of fuels and any chemicals.

### Data sources & survey design for fish and shellfish

Marine Scotland-Science is the primary contact for information on commercial fish and shellfish in Scottish waters. For spawning and nursery ground information, the applicant should refer to Ellis et al (2010)

<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=2&ProjectID=16843>) and Coull et al.

1998)([www.cefas.co.uk/media/29947/sensi\\_maps.pdf](http://www.cefas.co.uk/media/29947/sensi_maps.pdf)). While these provide maps of spawning and nursery grounds for most of the key marine fish species, these are only broad indications of likely potential spawning areas, much of which is based on relatively old data and incorporates temporal and spatial variability. The desk-study should also conduct a thorough search of scientific literature. Spawning and nursery grounds are not spatially or temporally fixed, potentially moving according to the conditions of the substrate, seabed habitats, climate and hydrodynamic regimes.

## **13. Terrestrial Ecology**

(SNH)

The approach to assessing the impact of the proposal on birds is included in this section. We advise that birds use of the sea in Nigg Bay must also be considered in the EIA.

### Potential effects

Habitat loss may not be restricted to sub-tidal areas. In particular, terrestrial habitats could be lost as a result of the temporary construction areas or working areas.

The potential effect of displacement of protected species and birds should be considered in the EIA. Also, the potential for harm to their resting places and any licences that may consequently be required (<http://www.snh.gov.uk/protecting-scotlands-nature/species-licensing/>).

### Approach and methodology

SNH welcome the proposal to follow a precautionary approach. The North East Scotland Biological Records Centre can also be a useful source of information (<http://www.nesbrec.org.uk/>).

There should be appropriate survey methods for birds use of both terrestrial and marine habitats. These may require different methods. SNH have provided initial advice on the survey method for birds and asked for a revised methodology for our comment.

SNH recommend that a phase 1 habitat survey with relevant target notes should be carried out with more detailed surveying (to NVC standard) of any areas where habitats and/or species of natural heritage interest are identified. Any rare or nationally scarce higher and/or lower plant species within the survey area should be identified and any necessary mitigation described.

(RSPB)

Thank you for consulting RSPB Scotland on the recent EIA scoping for the redevelopment of Aberdeen Harbour. We have the following comments to make, but note that birds present in the area are only mentioned briefly in the proposal (5.144); we recommend that this is expanded upon, paying particular attention to the areas described below to ensure the ornithological surveys adequately cover the study area.

Within the main development footprint and site boundary the species of concern are listed below:

- Up to 1500 eiders are regularly recorded in the area directly below the fog horn, particularly in late summer and autumn when moulting birds congregate here. Almost all the birds are likely to be breeders from the Ythan Estuary. RSPB Scotland would advise that impact on the eiders using this area and consequently any potential negative effect on the Ythan Estuary, Sands of Forvie and Meikle Loch SPA are fully explored to inform the necessary Habitats Regulations Assessment.
- Nigg Bay itself is a regular roost for passage and wintering waders, gulls and terns (also from the Ythan Estuary, Sands of Forvie and Meikle Loch SPA). There is an occasional sand martin colony and other breeding birds along the beach, which should be taken into account during any potential construction.

Outside the new development footprint but within the 2km study area the following species and areas concern us:

- Greyhope Bay – although in smaller numbers, eiders do roost offshore here and this is a regular roost onshore for Sandwich terns, oystercatchers, purple sandpipers and other waders.
- Within the south breakwater there are regular non-breeding congregations of eiders, gulls (including kittiwake, great black-backed gull and herring gull), shags, cormorants, goosanders and waders such as curlew, redshank, oystercatcher and purple sandpiper. Up to 80 goosanders are regularly recorded within the harbour boundary. These birds use the area during their post-breeding moult or winter within the harbour boundary. This area can also provide a useful safe haven for seabirds during rough weather.

Following on from the surveys and as part of the design process we expect that opportunities for mitigating potential impacts on birds and other wildlife will be considered. We strongly recommend that options for compensatory or enhancement measures also be explored. This could include the creation of areas suitable for tern breeding (most likely common or arctic terns) which have suitable fencing to keep out predators. This could be in the form of an island or a fenced area on a breakwater. This would require minimal work but would significantly increase the biodiversity value of such structures. A similar idea could be applied to the creation of safe areas for roosting eider, goosander or waders on the breakwaters.

(ACC)

Page 41 - Section 5.133 - the Sea Pea is also classified as Nationally Rare or Scarce at UK Level.

Page 41 - Section 5.134 - Designated Sites - should also be considering the potential effect to the designations themselves as well as impacts to habitats and species. I.e. will potential impacts reduce the size of the designation or will the designation be lost all together? This is particularly relevant to the Balnagask to Cove LNCS.

Page 42 - Section 5.137 - Potential Effects - this study states that 'no direct land take of any ecological designated area is proposed as part of the AHD development.' However, the Balnagask to Cove LNCS is situated within the site boundary for the proposed development. While there are no clear layout plans for the development at this stage, my concern is that this LNCS will be directly impacted by the development and that there will be some loss to this designation. This needs clarification. The LNCS is designated by the Council and protection is afforded through the Natural Heritage Policy NE8 within the ALDP.

#### **14. Landscape and Visual Effects**

(SNH)

SNH are broadly satisfied with the proposed approach to, and predicted effects of the Aberdeen Harbour development.

##### Approach and Methodology

The Landscape Institute and IEMA – 'Guidelines for Landscape and Visual Impact Assessment' has recently been released in a 3rd Edition (2013), and it is this edition that should now be consulted.

##### ZTV and Selection of Viewpoints

SNH support the initial use of ZTV modelling to establish a study area and inform the landscape and visual impact assessment. We would welcome the opportunity for further consultation (in tandem with Aberdeen City Council) on what aspects of the development are modelled and the selection of viewpoints. Both static and sequential viewpoints should be selected as well as both land and sea based visual receptors, where appropriate. SNH would expect the initial ZTV modelling of the development components to be used in design iteration, as part of impact mitigation.

##### Assessment

SNH support the initial use of the Landscape character assessment of Aberdeen (SNH 1996) to inform initial desk and field survey work. However this assessment was a City wide regional assessment of landscape character undertaken 17 years ago. SNH consider that a further more detailed level of landscape assessment work should be undertaken. This should assess, in particular, the local coastal character of the site and immediate surrounding area. This detailed scale of assessment, would be particularly useful in informing site design iterations and the relationship of the development with the adjacent communities of Torry and Balnagask (as part of the proposed Residential Amenity Study). SNH would welcome the opportunity to discuss this issue further in tandem with Aberdeen City Council. To inform this discussion, SNH have been undertaking some preliminary work in establishing an approach to coastal character assessment (based on work related to aquaculture development) and could provide some further guidance on draft methodologies.

Under the 5 categories of potential effects cited in **5.174**, the landscape and visual impacts of lighting should be assessed. This should include (but not be limited to) both on-shore lighting, including road, building and security lighting (including any lighting along the breakwaters and piers) and any off-shore navigational lighting. Illustration of night time impacts using photomontages from selected viewpoints is considered important to fully inform the consideration of effects.

(HS)

We welcome the preparatory work reported in the scoping document relating to both the methodology of the assessment for the historic environment and the potential impacts of the development in the bay area. For our statutory interests, we welcome

the proposed inclusion in the assessment of the scheduled monuments and Category A listed building:

- St Fittick's Church, Aberdeen (Index no. 10400) (also Category B Listed Building)
- Torry Battery, battery 130m ESE of Old South Breakwater (Index no. 9215)
- Tullos Cairn, cairn (Index no. 4055)
- Crab's Cairn, cairn (Index no. 4060)
- Baron's Cairn, cairn (Index no. 4126)
- Girdleness Lighthouse, Greyhope Road, including Fog Signal at South Site at NJ 9274 0530 (A Listed Building – HB no. 20078)

As noted at earlier in this response, Aberdeen City Council's Archaeology Services will also be able to advise on the assessment in relation to designated and undesignated historic environment assets.

#### Ground Conditions and Contamination

(ACC)

Page 55 - Section 5.222 - Ground Conditions and Contamination - should also consider the East Tullos Burn which is currently heavily contaminated and also discharges out to sea in Nigg Bay.

#### **15. Flood Risk and Surface Water Effects (5.79-)**

(SEPA)

##### Flood risk

The site should be assessed for flood risk from all sources in line with Scottish Planning Policy (Paragraphs 196-211). Our [Indicative River & Coastal Flood Map \(Scotland\)](#) is available to view online and further information and advice can be sought from your local authority technical or engineering services department and from our [website](#).

If a flood risk is identified then a Flood Risk Assessment should be carried out following the guidance set out in the Annex to the [SEPA-Planning Authority flood risk protocol](#). Our [Technical flood risk guidance for stakeholders](#) outlines the information we require to be submitted as part of a Flood Risk Assessment, and methodologies that may be appropriate for hydrological and hydraulic modelling.

We note that a full FRA is proposed in the EIA scoping report. The scoping report has identified coastal flooding as the most significant source of flood risk and proposes the creation of a detailed hydrodynamic coastal model which will incorporate the effects of wave action and local bathymetry. In the interests of sustainability, we would also recommend that the predicted impacts of climate change (sea level rise etc) are taken into account.

For information, a previous FRA was undertaken by Fairhurst (December, 2007) for a development at Greyhope Road. This FRA could potentially be of use.

An approximate 1 in 200 year water level for the area is 3.17mAOD based on extreme still water level calculations using the Coastal Flood Boundary Method. This does not take into account the potential effects of wave action, funnelling or local bathymetry at this location.

Furthermore, the National Oceanography Centre (formerly the Proudman Oceanographic Laboratory) operates a tide gauge at Aberdeen harbour. Data can be downloaded here:

[http://www.bodc.ac.uk/data/online\\_delivery/ntslf/processed/](http://www.bodc.ac.uk/data/online_delivery/ntslf/processed/)

In addition to preventing an increase in flood risk, we would also encourage opportunities to reduce any existing risk to be identified/ explored.

We would also recommend that you contact the Roads Department of Aberdeen City Council who, as Flood Prevention Authority, should be able to provide further information regarding flooding, flood alleviation and suitable freeboard allowances in the area.

### Surface water drainage

(SEPA)

The treatment of surface water runoff by sustainable drainage systems (SUDS) is a [legal requirement](#) for most forms of development, however the location, design and type of SUDS are largely controlled through planning. We encourage surface water runoff from all developments to be treated by SUDS in line with [Scottish Planning Policy](#) (Paragraph 209), [PAN 61 Planning and Sustainable Urban Drainage Systems](#), [PAN 79 Water and Drainage](#) and [NE6 – Flooding and Drainage policy in the Aberdeen City Local Plan (2012)]. SUDS help to protect water quality, reduce potential for flood risk and release capacity in the public sewerage network where the alternative is use of combined systems. Discharges to combined sewers should be avoided to free up capacity for waste water discharges.

It is important to ensure that adequate space to accommodate SUDS is incorporated within the site layout. Consideration should be given to this matter early in the planning process when proposals are at their most fluid and modifications to layout can be easily made with less expense to the developer. Each individual type of SUDS facility, such as a filter drain, detention basin, permeable paving or swale, provides one level of surface water treatment. The level of SUDS required is dependent on the nature of the proposed development, for example residential or non-residential, the size of development, and the environmental risk posed by the development which is principally determined by the available dilution of the receiving waterbody. Best practice requires the following levels of treatment:

- Residential developments of 50 houses or less and retail/commercial/business parks with car parks of 50 spaces or less require one level of treatment for all hardstanding areas including roads. We encourage this first level of SUDS to be source control. Please also refer to section 3.3 below;
- Residential developments of more than 50 houses and retail/ commercial/ business parks with car parks of more than 50 spaces require two levels of treatment for all hardstanding areas including roads. An exception is run-off from roofs which requires only one level of treatment. We recommend, as best practice, the second level of treatment to be a basin or pond designed in accordance with Sewers for Scotland Second Edition. Please also refer to section 3.3 below;
- Industrial developments require three levels of treatment for hard standing areas and two levels of treatment for roads. An exception is run-off from roofs which requires only one level of treatment. We recommend, as best practice, the second level of treatment to be a basin or pond designed in accordance with Sewers for Scotland Second Edition. Please also refer to section 3.3 below;
- All roads schemes typically require two levels of treatment, except for residential developments of 50 houses or less and retail/commercial/business parks with car parks of 50 spaces or less. For technical guidance on SUDS techniques and treatment for roads please refer to the [SUDS for Roads](#)

manual.

For all developments, run-off from areas subject to particularly high pollution risk (eg yard areas, service bays, fuelling areas, pressure washing areas, oil or chemical storage, handling and delivery areas) should be minimised and directed to the foul sewer. Where run-off from high risk areas cannot be directed to the foul sewer we can, on request, provide further site specific advice on what would be the best environmental solution.

The SUDS [treatment train](#) should be followed which uses a logical sequence of SUDS facilities in series allowing run-off to pass through several different SUDS before reaching the receiving waterbody. Further guidance on the design of SUDS systems and appropriate levels of treatment can be found in the CIRIA C697 manual entitled [The SUDS Manual](#). Advice can also be found in the SEPA Guidance Note [Planning advice on sustainable drainage systems \(SUDS\)](#). Please refer to the [SUDS section](#) of our website for details of regulatory requirements for surface water and SUDS. Comments should be sought from the local authority roads department and the local authority flood prevention unit on the acceptability of post-development runoff rates for flood control.

Comments from Scottish Water should be sought where the SUDS proposals would be adopted by them. We encourage the design of SUDS to Sewers for Scotland Second Edition standards and the adoption of SUDS features by Scottish Water as we are of the view that this leads to best standards and maintenance.

SUDS must be used on all sites, including those with elevated levels of contaminants. SUDS which use infiltration will not be suitable where infiltration is through land containing contaminants which are likely to be mobilised into surface water or groundwater. This can be overcome by restricting infiltration to areas which are not affected by contamination, or constructing SUDS with an impermeable base layer to separate the surface water drainage system from the contaminated area. SUDS which do not use infiltration are still effective at treating and attenuating surface water. Please refer to the advice note on [SUDS and brownfield sites](#) for further information.

(SEPA)

## **16. River Basin Management Planning**

The scoping report doesn't seem to mention river basin management planning.

The ES should identify if the impacts of the proposal are likely to lead to deterioration of the water environment or present opportunities for improving the water environment. The planning authority should take this into account in considering the application, as, in order to meet the requirements of the Water Framework Directive (2000/60/EC), planning authorities are designated "responsible authorities" by the Water Environment and Water Services (Designation of Responsible Authorities and Functions) Order 2006. Responsible authorities must carry out their statutory functions in a manner that secures compliance with the objectives of the Directive (i) preventing deterioration and (ii) promoting improvements in the water environment in order that all water bodies achieve "good" ecological status by 2015.

All transitional and coastal waters out to three nautical miles seaward from the Scottish territorial baseline falls under the Directive which requires them to be considered in terms of their chemical, ecological and hydromorphological status. With regard to section 7.2.1 in the scoping report it should be recognised that the overall classification of ecological status is made up of several different tiers of classification and includes the consideration of chemical, biological and hydromorphological parameters, and not just water quality.

In order to assist both applicants and planning authorities, we have made information available on our website ([www.sepa.org.uk/water/river\\_basin\\_planning.aspx](http://www.sepa.org.uk/water/river_basin_planning.aspx)) This includes the datasheets for the Don Estuary to Souter Head (WB ID 200105) and Dee (Aberdeen) Estuary (WB ID 200103) water bodies. These datasheets should form part of the baseline characterisation in the ES. River Basin Management Plans have been prepared to support



the successful implementation of the Directive and include measures set against individual water bodies which require to be implemented if “good ecological status” is to be achieved. The GIS interactive map (<http://gis.sepa.org.uk/rbmp/>) (complete with user guide) or the River Basin Management Plan data download function, both available on the River Basin Management Plan section of our website, should be used in assessing any development proposal. The map enables a search for individual water bodies by grid reference, place name or postcode. The data download tool allows water body information to be filtered by planning authority. Both the map and data download tool hold data sheets relating to each individual water body. The water body data sheets set out the water body’s ecological status, any pressures upon it, measures set up to resolve any issues and targets for any improvement needed. As responsible authorities, planning authorities should promote measures already agreed in respect of relevant water bodies as well as considering other opportunities for the proposals in question to contribute to Directive objectives.

The footprint areas for the proposed dredging and new structures in the marine environment should be included in the site layout description in the ES. This will allow the RBMP classification to be updated on completion of the development.

## **17. Waste water drainage**

Details of the waste water provision for your development should be provided in the ES or planning submission, including consideration of options for waste water treatment facilities. Drainage is a material planning consideration and will be assessed as part of your planning application in line with [PAN 79 Water and Drainage](#) and [NE6 – Flooding and Drainage policy in the Aberdeen City Local Plan (2012)]. Where there is a public sewerage system, waste water drainage from development within and close to the settlement envelope should be directed to that system. If the system has insufficient capacity, then early dialogue with Scottish Water will be required to determine if works are planned to overcome this problem, or what developer pro-rata contributions will be necessary to remove the constraint.

If there is no or limited public sewerage infrastructure, given the scale of development we would still expect the development of strategic infrastructure to adoptable standards. Contact should be made with Scottish Water to determine the standards required to ensure adoption of new infrastructure. Please note that we are not likely to support proposals for private foul drainage systems for significant development (eg more than 25 houses) where development of public infrastructure is the sustainable long-term solution. An interim solution may be acceptable provided an appropriate upgrade has been agreed with Scottish Water and there will be no unacceptable impact on the water environment. For further guidance please refer to our [Policy and Supporting Guidance on Provision of Waste Water Drainage in Settlements](#)

## **18. Pollution prevention and environmental management**

(SEPA)

One of our key interests in relation to major developments is pollution prevention measures during the periods of construction, operation, maintenance, demolition and restoration. The construction phase includes construction of access roads, borrow pits and any other site infrastructure.

We advise that the applicant should, through the EIA process or planning submission, systematically identify all aspects of site work that might impact upon the environment, potential pollution risks associated with the proposals and identify the principles of preventative measures and mitigation. This will establish a robust environmental management process for the development. A draft Schedule of Mitigation should be produced as part of this process. This should cover all the environmental sensitivities, pollution prevention and mitigation measures identified to avoid or minimise environmental effects. Details of the specific issues that we expect to be addressed are available on the Pollution Prevention and Environmental Management section of our [website](#).

A Construction Environmental Management Document is a key management tool to implement the Schedule of Mitigation. We recommend that the principles of this document are set out in the ES outlining how the draft Schedule of Mitigation will be implemented. This document should form the basis of more detailed site specific Construction Environmental Management Plans which, along with detailed method statements, may be required by planning condition or, in certain cases, through environmental regulation. This approach provides a useful link between the principles of development which need to be outlined at the early stages of the project and the method statements which are usually produced following award of contract (just before development commences).

Best practice advice developed by The Highland Council (in conjunction with industry and other key agencies) on the Construction Environmental Management Process is available in the guidance note [Construction Environmental Management Process for Large Scale Projects](#)

With respect to section 5.82 on page 32 the ES will need to demonstrate that the changes to the hydrodynamics in Nigg Bay will not impact upon the dispersion characteristics of the existing discharges within the bay.

Section 4.32 on page 20 lists the technical disciplines that will be covered in the ES. This includes "Flood risk and surface water effects". Recommend having separate sections on flood risk, and water quality and pollution prevention as these are normally considered separately.

The EC designated bathing water at Aberdeen is situated nearby. Information on the substrate type within the area to be dredged, dredging techniques and mitigation measures to minimise impacts upon the marine environment e.g. suspended sediment plumes and release of contaminants should be provided in the ES and CEMP. We recommend that the beneficial reuse of the dredged material be considered in the ES.

During the construction phase there is the potential for the pollution of transitional and coastal waters from silt, oil spills and chemicals. Information should be provided in the ES on measures to reduce these risks. SEPA produces a series of Pollution Prevention Guidelines, several of which may be utilized in preparation of the ES and development of the proposals [www.sepa.org.uk/about\\_us/publications/guidance/ppgs.aspx](http://www.sepa.org.uk/about_us/publications/guidance/ppgs.aspx) Useful guidance can also be found in CIRIA C584 entitled "Coastal and marine environmental site guide". Reference can be made to the appropriate checklists and good practice advice generally in this document.

## **19. Engineering activities in the water environment**

In order to meet the objectives of the [Water Framework Directive](#) of preventing any deterioration and improving the water environment, developments should be designed to avoid engineering activities in the water environment wherever possible. The water environment includes burns, rivers, lochs, wetlands, groundwater and reservoirs. We require it to be demonstrated that every effort has been made to leave the water environment in its natural state. Engineering activities such as culverts, bridges, watercourse diversions, bank modifications or dams should be avoided unless there is no practicable alternative. Paragraph 211 of SPP deters unnecessary culverting. Where a watercourse crossing cannot be avoided, bridging solutions or bottomless or arched culverts which do not affect the bed and banks of the watercourse should be used. Further guidance on the design and implementation of crossings can be found in our [Construction of River Crossings Good Practice Guide](#). Other best practice guidance is also available within the water [engineering](#) section of our website.

If the engineering works proposed are likely to result in increased flood risk to people or property then a flood risk assessment should be submitted in support of the planning application and we should be consulted as detailed below.

A site survey of existing water features and a map of the location of all proposed engineering activities in the water environment should be included in the ES or planning submission. A systematic table detailing the justification for the activity and how any adverse impact will be mitigated should also be included. The table should be accompanied by a photograph of each affected water body along with its dimensions. Justification for the location of any proposed activity is a key issue for us to assess at the planning stage.

Where developments cover a large area, there will usually be opportunities to incorporate improvements in the water environment required by the Water Framework Directive within and/or immediately adjacent to the site either as part of mitigation measures for proposed works or as compensation for environmental impact. We encourage applicants to seek such opportunities to avoid or offset environmental impacts. Improvements which might be considered could include the removal of redundant weirs, the creation of buffer strips and provision of fencing along watercourses. Fencing off watercourses and creating buffer strips both helps reduce the risk of diffuse water pollution and affords protection to the riparian habitat.

It is SEPA's understanding that the East Tullos burn drains into Nigg bay and this is currently the subject of a restoration project at the lower end just above the foreshore. It is requested that the report is amended to include the above information.

## **20. Disruption to wetlands including peatlands**

If there are wetlands or peatland systems present, the ES or planning submission should demonstrate how the layout and design of the proposal, including any associated borrow pits, hard standing and roads, avoid impact on such areas

SEPA's [Planning and Energy webpage](#) provides links to current best practice guidance on peat survey, excavation and management.

## **21. Estuarine Ecology**

### River Dee SAC

We note that the River Dee SAC is located nearby. Advice on designated sites and European Protected Species should be sought from SNH. For marine and transitional Special Areas of Conservation (SAC) and Special Protected Areas (SPA), these are Water Framework Directive (WFD) Protected Areas. Therefore, their objectives are also River Basin Management Plan objectives.

### Marine Non-Native Species

Given that the accidental introduction of Marine Non-Native Species (MNNS) has been highlighted as a risk for water body degradation, SEPA recommends that controls should be included in development planning and marine licensing for Marine Non-Native Species in line with WFD and Marine Strategy Framework Directive objectives, and [EU Biodiversity Strategy](#) targets. Under the WFD the presence of MNNS within a water body can constitute a significant pressure on the biological elements. Good status is usually the maximum a water body can achieve if MNNS are detected and this can fall to moderate status if MNNS are present above certain thresholds. Once well established, efforts to eliminate MNNS species have proven to be extremely expensive and so far, no non-native species have been successfully eradicated from the marine environment. Therefore, in view of these difficulties, SEPA supports the [GB Non-Native Species Secretariat](#) (<https://secure.fera.defra.gov.uk/nonnativespecies/home/index.cfm>) recommendation to put in place effective biosecurity measures to prevent introduction and to stop their spread.

Accidental introduction of MNNS can also occur via attachment to construction plant, specialised equipment and moorings as these are moved from one area to another. SEPA

recommends that method statements produced as part of the marine licence application process should also include measures that will be adopted to minimise these risks before the constructional, operational or decommissioning phases of a project commence. Guidance that may be drawn upon includes:

The alien invasive species and the oil and gas industry guidance produced by the Oil & Gas industry ([www.ogp.org.uk/pubs/436.pdf](http://www.ogp.org.uk/pubs/436.pdf)).

SNH web-based advice on Marine non-native species ([www.snh.gov.uk/land-and-sea/managing-coasts-and-sea/marine-nonnatives/](http://www.snh.gov.uk/land-and-sea/managing-coasts-and-sea/marine-nonnatives/))

Marine non-native guidance from the GreenBlue (recreation advice) ([www.thegreenblue.org.uk/clubs\\_and\\_training\\_centres/antifoul\\_and\\_invasive\\_species/best\\_practice\\_invasive\\_species.aspx](http://www.thegreenblue.org.uk/clubs_and_training_centres/antifoul_and_invasive_species/best_practice_invasive_species.aspx))

SNH recommend that measures to minimise the risks of introducing of MNNS into the adjacent water bodies be included in the ES and later as part of the planning application within the Construction Environmental Management Plan (CEMP).

## **22. Existing groundwater abstractions**

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

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

## **23. Water abstraction**

Where water abstraction is proposed we request that the ES, or planning submission, details if a public or private source will be used. If a private source is to be used the information below should be included. Whilst we regulate water abstractions under The Water Environment (Controlled Activities) (Scotland) Regulations 2011, we require the following information to determine if the abstraction is feasible in this location;

- Source eg ground water or surface water;
- Location eg grid ref and description of site;
- Volume eg quantity of water to be extracted;
- Timing of abstraction eg will there be a continuous abstraction;
- Nature of abstraction eg sump or impoundment;
- Proposed operating regime eg details of abstraction limits and hands off flow;
- Survey of existing water environment including any existing water features;
- Impacts of the proposed abstraction upon the surrounding water environment.

If other development projects are present or proposed within the same water catchment then we advise that the applicant considers whether the cumulative impact upon the water environment needs to be assessed. The ES or planning submission should also contain a justification for the approach taken.

A licence for water abstraction CAR/R/1012622 is located at NGR NJ 9669 0488. The

licence for a maximum of 600 m<sup>3</sup>/day is granted to Fishery Research Services. No further details for this water abstraction activity are known to SEPA. As the abstraction location (as appears on SEPA licence) is within the harbour Development area it would be expected that the EIA evaluate and risk assess the development impact on this potential receptor.

## **24. Space for waste management provision within site layout**

In accordance with Scottish Planning Policy and [R6 policy in the Aberdeen City Local Plan (2012)], space for collection, segregation, storage and possibly treatment of waste (eg individual and/or communal bin stores, composting facilities, and waste treatment facilities) should be allocated within the planning application site layout. Please consult with your local council's waste management team to determine what space requirements are required within the application site layout. Some local authorities have an information sheet setting out space requirements.

## **25. Borrow pits**

Detailed investigations in relation to the need for and impact of such facilities should be contained in the ES or planning submission. Where borrow pits are proposed, information should be provided regarding their location, size and nature. In particular, details of the proposed depth of the excavation compared to the actual topography and water table should be submitted. In addition details of the proposed restoration profile, proposed drainage and settlement traps, turf and overburden removal and storage for reinstatement should be submitted.

The impact of such facilities (including dust, blasting and impact on water) should be appraised as part of the overall impact of the scheme. Information should cover, in relation to water; at least the information set out in [Planning Advice Note PAN 50 Controlling the Environmental Effects of Surface Mineral Workings](#) (Paragraph 53). In relation to groundwater, information (Paragraph 52 of PAN 50) only needs to be provided where there is an abstraction or groundwater dependent terrestrial ecosystem within 250 m of the borrow pit. Additional information on groundwater is provided above.

## **26. Air quality**

The local authority is the responsible authority for local air quality management under the Environment Act 1995, and therefore we recommend that Environmental Health within the local authority be consulted.

They can advise on the need for this development proposal to be assessed alongside other developments that could contribute to an increase in road traffic. They can also advise on potential impacts such as exacerbation of local air pollution, noise and nuisance issues and cumulative impacts of all development in the local area. Further guidance regarding these issues is provided in NSCA guidance (2006) entitled [Development Control: Planning for Air Quality](#).

The EIA screening report acknowledges poor air quality in Aberdeen resulting in the designation of three AQMAs. The EIA should consider impact of construction activity and traffic on key routes to and from the harbour, particularly Wellington Road, where roadside pollution has increased year on year.

## **27. Other issues**

The report indicates that the new harbour will have fuel storage facilities and this will need to have the necessary hazardous substances consent from the Local Authority and they will need this to be then be covered by the COMAH regime for its operation (if the quality of fuel exceeds the 2500 tonne threshold). The applicant should discuss such matters with the

HSE as well as SEPA as part of any pre-application advice.

## **28. Roads**

(ACC)

Aberdeen City Council's Roads Projects Team on the Scoping Report believe the approach in the EIA seems to be reasonable.

In addition to the EIA, there will be a requirement for a Transport Assessment. At present National Cycle Route 1 makes use of the Coast Road, and the presence of this needs to be taken into account in the TA. Cycling by Design offers guidance on the suitable level of infrastructure in terms of vehicular movements. The scoping seems to identify an access route via Wellington Road, Hareness Road and the Coast Road. We wouldn't want to see traffic routing through the Hareness roundabout as this has substantial capacity issues at present. Tom Rogers (Team Leader for Roads Projects) has identified what he thinks would be a more suitable and attractive route accessing the Coast Road from the Southerhead roundabout and Langdykes Road. Apart from that most issues are covered.

(TS)

With reference to your recent correspondence on the above development, we write to inform you of our involvement as Term Consultants to Transport Scotland – Trunk Road and Bus Operations (TRBO) in relation to the provision of advice on issues affecting the trunk road network.

We have been passed a copy of the Environmental Statement Scoping Report prepared by RPS Group Limited in support of the above development. Having reviewed the information provided, we would make the following comments on behalf of Transport Scotland.

### **Development Proposals**

It is noted that the proposed development proposal involves the construction and operation of a new harbour in Aberdeen. The proposed Aberdeen Harbour Development (AHD) which would be located just south of the existing harbour would occupy a large proportion of Nigg Bay, comprising approximately 1400m of new quays (13-14 new berths). We note the indicative site boundary of the proposed harbour includes for the extent of plant and associated operational areas as illustrated in Figure 3 of the Scoping Report.

We also note that the facility will be designed to accommodate platform support vessels in excess of 90m in length, cruise vessels, passenger and vehicle ferries, liquid bulk vessels and general cargo vessels.

The closest trunk roads providing strategic access to the site are the A90(T) and the proposed Aberdeen West Periphery Route (AWPR) which should be in place prior to the start of the construction of the harbour.

### **Access Strategy**

We note that access to the site will require construction of a 12m wide carriageway from the proposed AHD entrance to Greyhope Road. However, the exact location for the connection between the existing Greyhope Road and AHD entrance is not currently known and will be developed as part of the design evolution and considered by the ES. The information provided to date does not include any details on trip generation potential and trip distribution, however, given that a high proportion of construction vehicles and operational traffic are likely to travel to the site via the A90 trunk road and the proposed AWPR, Transport Scotland will require development traffic and associated environmental impacts on the trunk road to be considered in some detail.

## Assessments of Impacts

Given the anticipated trip generation potential for the development, there will be a requirement for a standalone Transport Assessment (TA) to be prepared to assess the traffic impacts associated with the development on the operation of the existing road network. We note from the Scoping Report that a TA will be undertaken to assess the traffic and transport implication of the proposed development. This is welcomed.

Notwithstanding this, we would generally advise that the assessment of environment effects of road traffic should be undertaken separately from the TA and in accordance with the guidance set out within the Institute of Environmental Assessment (IEA) publication "Guidelines on the Environmental Assessment of Road Traffic (Guidance Note 1)", 1993. The IEA guidelines generally advises that further assessment should be undertaken on:

- "Highway links where traffic flows will increase by more than 30% (or the number of HGV's will increase by more than 30%); and
- Any specifically sensitive areas where the traffic flows have increased by 10% or more."

In considering trunk road impacts there are a number of issues which should be taken into consideration when assessing the merits of this site. In general it is expected that information will be provided on the wider impact of development related traffic where this may be appropriate together with the requirements for consequent mitigation. The Environmental Statement should provide information relating to the preferred route options for the movement of heavy loads and anticipated construction staff movements via the trunk road network during the construction period. In addition, information must be supplied identifying potential environmental impacts on the trunk road once the development is operational, together with any required mitigation measures.

Potential trunk road related environmental impacts such as severance, noise, air quality, driver delay, pedestrian amenity, safety etc should be considered and assessed where appropriate (i.e. where IEA thresholds for further assessment are exceeded). In the case of the Environmental Statement, the methods adopted to assess the likely traffic and transportation impacts on traffics flows and transportation infrastructure, should comprise:

- Determination of the baseline traffic and transportation conditions, and the sensitivity of the site and existence of any receptors likely to be affected in proximity of the trunk road network;
- Review of the development proposals to determine the predicted construction and operational requirements; and
- Assessment of the significance of predicted impacts from these transport requirements, taking into account impact magnitude (before and after mitigation) and baseline environmental sensitivity.

Where environmental impacts are fully investigated but found to be of little or no significance, it is sufficient to validate that part of the assessment by stating in the report:

- The work that has been undertaken e.g. Transportation/ Noise / Air Quality Assessments etc;
- What this has shown i.e. what impact if any has been identified; and
- Why it is not significant.



It is not necessary to include all the information gathered during the assessment of these impacts, although this information should be available, if requested.

### **Noise and Vibration**

We note that noise assessment will be undertaken. Impacts to sensitive receptors associated with noise and vibration arising from the proposed development during the construction and operational phases should be considered. Operational traffic noise and construction traffic noise should be assessed by considering the increase in traffic flows and following the principles of CRTN. We would also note the Design Manual for Roads and Bridges (DMRB) Vol.11 which states:

*"In the period following a change in traffic flow, people may find benefits or disbenefits when the noise changes are as small as 1dB(A) – equivalent to an increase in traffic flow of 25% or a decrease in traffic flow of 20%. These effects last for a number of years."*

PAN1/2011 advises that a change of 3dB(A) is the minimum perceptible under normal conditions, and a change of 10dB(A) corresponds roughly to halving or doubling the loudness of a sound.

Therefore, the Environmental Statement should consider potential impacts to identified trunk road receptors, in terms of:

- Predicted noise levels from construction traffic; and
- Any increases to road traffic attributed to the Proposed Development.

### **Air Quality**

We note from the scoping report that an assessment of the impact of the development proposals on Air quality will be undertaken. Where a significant change in road traffic characteristics has been identified as a result of the proposed development, changes in air quality at a worst case scenario sensitive receptor adjacent to the trunk road will require further assessment. The Scoping Report outlines the IEA guidelines for identifying when an impact is significant, however we would however request the use of the alternative guidelines below.

The first criteria for identifying roads with a significant traffic change is defined in the Environmental Protection UK "Development Control: Planning for Air Quality" publication:

**A change in annual daily traffic (AADT) flows of more than 5% or 10% (depending on local circumstances) on a road with more than 10,000 Annual Average Daily Traffic (AADT).**

The second set of criteria is taken from the Design Manual for Roads and Bridges Air Quality Screening Criteria:

- Road Alignment will change by 5m or more; or
- Daily traffic flows will change by 1,000 AADT or more; or
- Heavy Duty Vehicle (HDV) flows will change by 200 AADT or more;
- Daily average speed will change by 10 kilometres per hour (km/hr) or more; or
- Peak hour speed will change by 20km/hr or more.

In the assessment, a conservative approach should be utilised and traffic changes screened against both sets of criteria; if a road link triggers any of the criteria it should be assessed further. Where significant changes in traffic are not noted for any link, no further assessment needs to be undertaken.

(SNH)

## Annex B Information to assist with a Habitats Regulations Appraisal (HRA)

The following advice is provided to help with producing information to inform a Habitats Regulation Assessment (HRA) for this proposal, and with carrying out that appraisal.

For information and relevant links relating to Natura sites and the Habitats Regulations please see <http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/international-designations/natura-sites/>.

### Sites and features to consider

The table below summarises the SACs and the features for which they are designated that should be considered. Please note however, that this assessment is indicative only and we recommend it is re-appraised as more detail of the project becomes available. A final assessment cannot be concluded until the design, construction methods and mitigation are identified. Where these cannot be known until after consent is granted, a worst case scenario should be used as the basis for assessment, or a matrix, considering the different options.

SPAs are only listed in this table because there is not presently information available to determine whether there would be a likely significant effect. The applicant will be able to use the surveys they carry out to complete and update this table.

Natura Site Name	Qualifying feature name	Likely significant effect	Reasons (see below)
River Dee SAC	Atlantic salmon	Yes	1, 2, 3, 4
	Fresh-water pearl mussel	Yes	While fresh-water pearl mussel will not occur in the development site, impacts to salmonids could have subsequent impacts to the mussels.
	Otter	No	Otter are not known to occur in the area proposed for development. If present, it would only be in small numbers so an effect on these would not lead to an adverse affect on site integrity.
Moray Firth SAC	Bottlenose dolphin	Yes	1, 2, 3, 4, 5, 6
			Other features will not be considered further as they are some distance from this proposal and there is no connectivity.
Isle of May SAC	Grey seal	Yes	1, 2, 3, 5
			Other features will not be considered further as they are some distance from this proposal and there is no connectivity.
Berwickshire and North Northumberland Coast SAC	Grey seal	Yes	1, 2, 3, 5
			Other features will not be considered further as they are some distance from this proposal and there is no connectivity.

<b>Firth of Tay &amp; Eden Estuary SAC</b>	Common seal	Unknown at this time	1, 2, 3, 5
			Other features will not be considered further as they are some distance from this proposal and there is no connectivity.
<b>Dornoch Firth SAC</b>	Common seal	Unknown at this time	1, 2, 3, 5
			Other features will not be considered further as they are some distance from this proposal and there is no connectivity.
<b>Fowlsheugh SPA</b>	Breeding populations of fulmar, guillemot, herring gull, kittiwake, razorbill and seabird assemblage.		
<b>Montrose Basin SPA</b>	Non-breeding populations of dunlin, eider, greylag goose, knot, oystercatcher, pink-footed goose, shelduck, redshank, wigeon and waterfowl assemblage		
<b>Ythan estuary, Sands of Forvie and Meikle loch SPA</b>	Breeding populations of common, little and sandwich tern. Non-breeding populations eider duck, lapwing, redshank, pink-footed goose and waterfowl assemblage.		

### Potential effects of proposed development

1. Noise and vibration impacts - from dredging, piling, drilling and blasting, and from construction and traffic movements - primarily construction.
2. Reduced water quality – including increased suspended solids and reduced dissolved oxygen from piling and dredging, and possible release of contaminants – construction and operation.
3. Timing and duration of work – construction.
4. Lighting – construction and operation.
5. Physical disturbance – for example injury from collision with vessels – construction and operation.
6. Indirect effects of prey availability – construction and operation.

The Montrose basin and Ythan estuary are also Ramsar sites:

The Scottish Government has chosen as a matter of policy to apply the same considerations to the protection of Ramsar sites as if they were classified as SPAs

(Revised Guidance Updating Scottish Office Circular No. 6/1995, 2000).

<http://www.scotland.gov.uk/library3/nature/habd-00.asp>

This will not require any further work in terms of the HRA but a separate conclusion should be drawn for the Ramsar sites.

### **Methodology for Habitat Regulations Assessment (HRA)**

There are a number of consents required for this project. Each of these will be relevant to a different aspect of the proposal. The effects of these on the Natura sites will need to be considered by the relevant competent authorities as part of the consenting process.

Regulation 48 asks “can it be ascertained that the proposal will not adversely affect the integrity of the site?” The test is not to show whether there would be an effect but to ascertain that the proposal will not adversely affect the integrity of a Nature site before it can be consented. This needs to take account of all effects associated with the proposal, including both construction and operational effects.

We suggest using and including the following advice:

Identify the **potential impacts** and likely consequences for the **conservation objectives** of the **qualifying features**.

- For each impact assess the **probability** of it affecting the conservation objectives;
- For each impact assess the **magnitude, duration & reversibility** of the effects;
- Consider mitigation proposed and its likely effectiveness in removing or reducing impacts; and
- Record any assumptions made and evidence or advice used.

Conclude whether it can be ascertained that site **integrity** will not be adversely affected.

The assessment need not be complex, particularly where the impacts are clear. It is important, however, that the assessment is fully reasoned with sufficient detail and any decisions arrived at clearly recorded along with reference to any advice obtained.

For clarity, the test is no adverse affect on site integrity and not any other combination or variation of these words. This is a strong test which should help meet the obligation to avoid deterioration of European sites.

“In combination effects” need to be considered with a list of current projects. For the Moray Firth and seal SACs it will be necessary to consider NRIP projects and offshore windfarms along the East coast. There may be some more localised developments to consider as well for some of these sites, such as the Victoria & Albert in Dundee. For the River Dee SAC, the AWPR crossing of the Dee should be considered, the European Offshore Wind Development and works in Aberdeen harbour. It is likely that other projects may emerge in future and these will also need to be considered.

### ANNEX 3 (MS)

Consultee	No.	Point for inclusion	Section/ Pg ES	Sign
MSS Oceanography	1	Coastal processes (including wave, tides, littoral currents and sediment transport with and without the development) must be modelled and evaluated in the ES		
	2	Different options for the proposed harbour and breakwater layout should be presented in the ES		
MSS Marine Fish and Commercial Fish	3	The ES should include BOWL in the projects taken into consideration for cumulative effects		
	4	The ES must demonstrate consideration of the effects on local birds of potential impacts on sandeels		
	5	The ES must show evidence of direct fisheries consultation in relation to creel fishing for crab and lobster		
	6	The ES must demonstrate consideration to restrictions on vessel traffic during construction		
MSS Diadromous Fish	7	The ES must include an overview of the use or likely use of the proposed development area by salmon, sea trout and eels.		
	8	The ES must demonstrate consideration of impacts by the development on diadromous fish and salmon and sea trout net fisheries in the vicinity of the works during construction, operation and if relevant decommissioning.		
	9	The ES must demonstrate consideration of the requirement for monitoring or mitigation measures in respect of diadromous fish.		
	10	The ES must demonstrate consideration of the potential for cumulative impacts from local developments and those further afield in respect of diadromous fish.		
MSS Benthic Ecology	11	The ES must demonstrate consideration of the potential impacts of all species introductions.		
MSS Marine Mammals	12	Noise propagation modelling is required with regard to piling noise.		
	13	The ES must demonstrate consideration given to alternatives to piling as well as potential mitigation		
	14	The ES must take into account the entire East Coast area when considering		

		which projects should be included in the Cumulative Impacts section.		
Marine Scotland Compliance – Aberdeen Fishery Office	15	The ES must demonstrate consideration of impacts on the active lobster fishery around Nigg Bay.		
	16	The ES must demonstrate consideration given to the effects of construction traffic or increased marine traffic following construction on the brown Crab fishery operating outside Nigg Bay.		
Marine Analytical Unit	17	The ES should clearly outline the assessment criteria for the Labour Market Catchment Area		
	18	The ES should demonstrate consideration of the ‘ <i>Additionality and Economic Impact Guidance Note</i> ’ (Scottish Enterprise, 2008)		
	19	The ES should clearly outline the assessment criteria for the Tourism Study Area		
	20	The ES should clearly outline the definition of ‘local’ ‘regional’ and ‘national’ with regards to their estimated economic impacts.		
	21	Economic impacts should include the presentation of both GVA (Gross value added) and employment impacts. Such impacts should be shown as direct, indirect and induced.		
	22	Economic impacts should be shown as both gross and net. The latter should make reference to any deadweight as well as leakage and displacement effects.		
	23	The ES must demonstrate the consideration of potential cumulative impacts		