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cc. Tom Mallows, The Crown Estate

27 January 2010

Dear Mr Scott

**DRAFT REPORT TO INFORM APPROPRIATE ASSESSMENT OF THE PENTLAND FIRTH STRATEGIC AREA LEASING ROUND**

We would like to thank The Crown Estate (TCE) for consulting Scottish Wildlife Trust (SWT) on this document. SWT is the largest voluntary body working for all the wildlife of Scotland, representing more than 35,000 members who care for wildlife and the environment. SWT seeks to raise public awareness of threatened habitats and species and manages over 120 reserves Scotland-wide, including many coastal sites. We are also involved in a wide-range of marine policy and project work.

**General points**

**Timescales**

We understand that deadlines for concluding leases by the end of March have condensed the timescale for comment on the consultation document to three weeks. We have concerns that this could have implications for the quality of responses.

**Scope of draft AA report**

We anticipate that, once marine spatial planning is established, the Pentland Firth (PF) Marine Plan will include Plan-level Habitats Regulations Assessment (HRA) covering the full range of sectors and interests, and Marine Scotland is likely to be the lead competent authority. The current draft report to inform Appropriate Assessment (AA) covers only the leasing round, in the absence of information on level, type and impacts of development. We would strongly recommend that the formal PF Marine Planning process, when it is established, repeats this AA process in the light of improvements in information on risk, impacts and mitigation.

While we are pleased that TCE is undertaking this 'interim' AA, we would like to highlight the following issues that we feel are unresolved at this stage, and yet which should, we believe, play a role in strategic decision-making on whether the marine renewables development in this area will have unacceptable environmental impacts. Plan-level AA is able to conclude that there will be no adverse effect on the integrity of a European/Ramsar site on the basis that identified mitigation measures, future conditions to lease agreements, regulatory consents and future project-level AAs will ensure that this will be the case. While we understand that this approach is believed to be HR compliant and is the pragmatic approach TCE is adopting, there remain areas of considerable uncertainty. Some of the points below are directed at the regulator and marine authority, Marine Scotland, to inform the formal planning system and associated HRA.

### **Risk, impacts and proposed mitigation**

- We believe that the combination of the lack of baseline data, (for example, lack of cetacean data on distribution and abundance in much of the Pentland Firth region), the lack of knowledge of the precise devices and impacts, and the lack of knowledge of the effectiveness of potential mitigation measures, mean that risks of damage to integrity are extremely difficult to assess. The various risk tables are clearly only an estimate of risk. The rationale for decisions on the various levels of risk, and information on what each level involves, are not provided. We would therefore like to see a very precautionary approach taken to development. The avoidance of sensitive areas should be the preferred option to minimise risk and prevent damage, rather than the reliance on mitigation which characterises the consultation document. Given levels of uncertainty, we would like to see new development avoiding European sites or areas of importance to associated species until this uncertainty is resolved.
- We would like to see an incremental approach to development taken in all cases, building in a high level of precaution with sound monitoring over an appropriate timescale, rather than rapid commercial-scale development.
- It would be helpful if the information underlying the various proposed mitigations in Table 19 were discussed in more detail. We would like to see more discussion at this strategic level of the range of technological mitigation options available. This would include, for example, application of the appropriate technology to the appropriate site conditions, and the prioritization of appropriate techniques in order of risk of environmental damage (eg pile driving versus the other available techniques).
- We seek reassurance that the effectiveness of the mitigation measures described in Section 8 and Table 19 are sufficiently scientifically-evidenced to ensure that the conclusion of the AA of 'no adverse impact on site integrity' is indeed legally defensible. We would like to see a clear account of this scientific evidence. We have concerns that it may not be possible to mitigate the cumulative impacts of many devices adequately.

### **Cumulative and in-combination impacts**

- We seek reassurance that the regulator, with the help of the lessor, will ensure that the individual PF projects cumulatively and 'in-combination' with other plans or projects (not only other PF renewables developments but all other plans and projects, including Round 3 and STW wind sites) will not have an adverse impact on site or associated species integrity. The PFSA plan is for 700MW by 2020 and up to 2GW in total, which could involve the installation of many hundreds of devices in the area. We

would like reassurance that all possible means will be used in lease and consent agreements to take account of cumulative/in-combination impacts.

- We are particularly concerned about the cumulative and in-combination impacts on seabird and marine mammal foraging and loafing areas and about the noise impacts of pile-driving on marine mammals and their prey species taking place simultaneously over a large area of sea.
- Ensuring no adverse impact cumulatively or in-combination is likely to involve setting conditions of lease and consent, and ensuring that the necessary baseline information is gathered and monitoring and feedback takes place. We are concerned that it will be difficult for individual developers or the regulator to demonstrate this in practice, as consents will be granted for a significant number of individual developments at around the same time, before any cumulative or in-combination issues can be identified and assessed for the initial suite of sites. We would like clarity on how 'no adverse cumulative or in-combination impact' will be demonstrated.
- We would like clarity on how cumulative/in-combination impacts will be quantified in cases where each Project-level HRA concludes no significant impact, but where, in-combination, the apparently insignificant impacts of many Projects are indeed having an adverse impact on site/species<sup>1</sup>.

#### **Adaptive management and 'living within environmental limits' threshold**

- We would like the competent authority and regulator to set an upper threshold for development of the PFSA based on 'living within environmental limits' and taking account of other plans and projects in the area in order to minimise in-combination impacts and ensure that affected species have sufficient 'refuge space'.
- We would like Marine Scotland to establish a formal process of adaptive management, including reassessment of impacts, in-combination and cumulative, and founded on good baseline data, once developments are able to be monitored in operation. The conclusion by Tyldesley and Associates (2009)<sup>2</sup> that Plan-level AA may have to rely on Project-level assessment to demonstrate no adverse impact, points to the need for a feedback loop between Project-level and future iterations and refinements of strategic Plan-level assessments.
- We seek reassurance that where it is found that at project level that a project or number of projects in combination are found likely to have an adverse impact on site integrity the regulator and lessor have a clear scale-back protocol.

#### **Addressing wider environmental impacts**

- We would like clarification on how Annex IV European Protected Species, basking sharks and nationally important marine biodiversity omitted from the AA process are taken into account in the consenting process. SWT has coastal reserves at Linga Holm, Hill of White Hamars and Holm of Burghlee. Of these Linga Holm is of particular concern, as it accounts of 7% of the UK grey seal population, with over 3000 pups born each year.

### **Specific points**

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<sup>1</sup> 'Assessors of plans should be alert to the fact that a number of individual proposals, each having no significant effect alone, may combine to produce a risk of significant effects on a European site' Tyldesley, David and Associates (2009), The Habitats Regulations Assessment of Local Development Document, revised draft guidance for Natural England.

<sup>2</sup> Tyldesley, David and Associates (2009)

## **Section 1.2**

Avoidance and mitigation measures – ‘*developers will be required to demonstrate that, with the inclusion of these measures, their project proposals will meet the Plan-level avoidance and mitigation objectives*’ We welcome this requirement, which we would like to see translated into obligations in lease and consent conditions. However, we believe that developers should have to demonstrate the actual effectiveness of mitigation to meet Plan objectives, not simply that they are incorporating mitigation measures.

### **Section 3, Table 5, Table 19** – Potential for adverse effects on habitat features

Physical disturbance – loss/gain/damage of habitat

- Table 5 correctly concludes that the amount of habitat lost depends on the size of structures and their location. We have concerns, as outlined in our general comments above, about in-combination/cumulative impacts of many devices together on habitat damage and loss. We hope that these impacts can be avoided if account is taken of the general points raised above, including setting upper thresholds for development based on ‘living within environmental limits’.

### **Section 4, Table 7, Table 8, Table 19** - Seabird species

- There is considerable uncertainty about the extent of many of the effects of development on seabirds and marine mammals, including the exclusion of from foraging areas, disturbance and hearing damage from noise, and contamination effects. We are concerned that even a low risk of impact (designated yellow in Table 7), resulting in small impacts over a large area could prove significant to seabird populations if either large numbers of devices or high vulnerability are involved, and the proposed mitigation could be inadequate.
- For example, mitigation measure 28 ‘site selection of devices to avoid adversely affecting designated species’, for example, can only be effective if sufficient alternative sites are available for the total generational capacity proposed by the plan. Similarly mitigation measures 3 and 12 to ‘use methods and/or timings to reduce noise’ will presumably only be effective if there are sufficient ‘noise-free’ foraging and habitat areas. As above, the avoidance of adverse impacts will require that upper thresholds for development are set on environmental grounds, not desired generational capacity, and that a precautionary approach is taken to increasing the scale of development.

### **Section 5, Table 12, Table 19** – Marine mammal features

#### **5.2.1** Toxic contamination

- Although the risk of fuel spillage is described as low, a larger one at a vulnerable site could constitute adverse impact. While we accept that hydrodynamic conditions are likely to disperse any spill we have concerns in principle about the reliance on PECP and at project level as a means of demonstrating ‘no adverse impact’. PECP is carried out to minimize damage after a pollution event and can therefore be no guarantee that adverse impact will be avoided. Where a population is particularly rare, threatened or declining, for example bottlenose dolphin or common seal, any level of damage or mortality will be unacceptable.

#### **5.2.2.2** Noise disturbance

- As the draft report correctly suggests, there is a great deal of uncertainty over the nature and extent of noise impacts on marine mammals, both during construction and operation.
- In Table 12 of the draft report it is concluded that pile-driving would have a lesser impact than the considerable zone of disturbance (up to 20km) experienced around a wind turbine because the piles are smaller. This does not take into account the possibility that the nature of the noise may not be altered by smaller piles or that pile-driving could be taking place simultaneously throughout the area and, indeed, in not too distant STW wind and Round 3 wind sites. It is unclear how the mitigation measure to 'use methods and/or timings to reduce noise' can be effectively implemented in this case to avoid adverse impacts. While we are aware that lease and consent agreements can include conditions to avoid adverse impacts, we have concerns that the adjusting the timing of pile driving for many developments may not be practical, and that affected species will have insufficient 'refuge space' from development. We would like alternatives to pile driving to be considered and evaluated in terms of their potential impacts in this document.
- The conclusion in Table 12 that wave and tidal devices would not be likely to cause a permanent or a temporary threshold shift (PTS or TTS) during operation is extrapolated from limited data on the operation of one device. We are concerned that the operation of several tens or even hundreds of devices may have a large zone of audibility and could have a significant disturbance impact.


#### **5.2.3.1 Collision risk**

We are pleased that the consultation does not make reference to the use of Acoustic Deterrent Devices (ADDs) to prevent wildlife interactions with tidal turbines. We do not support the routine use of ADDs to achieve this, as they may themselves cause disturbance to and displacement of marine mammals (including European Protected Species), particularly if deployed over a wide area associated with a tidal array or across a confined channel. We would like confirmation that ADDs are not being considered as appropriate mitigation in this case.

#### **Sections 6, 7 and 8 – Effects on otter, salmon. Sea lamprey and pearl mussel**

- We support the conclusions of these sections.

Yours sincerely



Rebecca Boyd,  
Marine Policy Officer