



Association of Salmon Fishery Boards

Capital Business Centre, 24 Canning Street, Edinburgh, EH3 8EG
Tel: 0131 272 2797 | www.asfb.org.uk

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Andrew Bendell
RSK Environment Ltd
Spring Lodge
172 Chester Road
Helsby
Cheshire
WA6 0AR

Preliminary Consultation for Offshore Cable Corridors: East Coast HVDC LINK North East Scotland to North East England electricity connection

Dear Mr Bendell,

Thank you for your letter of 15th August 2011, which Alan Williams referred to me. The Association of Salmon Fishery Boards is the representative body for Scotland's 41 District Salmon Fishery Boards (DSFBs). DSFBs have a statutory responsibility to protect and improve salmon and sea trout fisheries.

Salmon and Sea trout angling generates significant benefits for our rural economy. An analysis completed in 2004 demonstrated that freshwater angling in Scotland results in the Scottish economy producing over £100 million worth of annual output, which supports around 2,800 jobs and generates nearly £50million in wages and self-employment into Scottish households, most of which are in rural areas. Atlantic salmon and sea trout are also of significant conservation importance. There are 17 Special Areas of Conservation for Atlantic salmon in Scotland, and both Atlantic salmon and sea trout are included on the draft list of 'priority marine features' - the habitats and species of *greatest conservation importance* in inshore waters as part of the Scottish Government's Marine Nature Conservation Strategy.

It is important to note that all three proposed cable routes have the potential to impact upon migratory fish. A major concern would be the potential effects of electro-magnetic fields arising from the cables. The effects of EMFs on migratory fish are currently unclear, but a recent review by SNH¹ suggested a number of information gaps including the migratory routes and marine feeding areas for Atlantic salmon and sea trout.

It should also be noted that the proposed routes, and in particular the near-coast route, have the potential to have a direct effect on a number of SACs for Atlantic salmon, including the River Tweed, River Teith, River Tay, River South Esk and River Dee. Due to the uncertainty surrounding the migration routes of Atlantic salmon, it is also possible that other Scottish SACs for Atlantic salmon could also be affected. The most significant effects are likely to be as smolts emerge into the sea and as adults return to their natal rivers. In addition, the feeding areas for sea trout, and the potential for displacement of prey species must also be considered.

The ASFB have recently considered these potential effects in relation to migratory fish and marine renewable energy and as such, we are in full agreement with the scoping comments for marine renewables set out by Marine Scotland Science and reproduced in appendix A. Many of these issues are pertinent to the proposed development. Marine Scotland Science are in the process of providing information to address some of these

¹ Gill, A.B. & Bartlett, M. (2010). Literature review on the potential effects of electromagnetic fields and subsea noise from marine renewable energy developments on Atlantic salmon, sea trout and European eel. *Scottish Natural Heritage Commissioned Report No.401*

issues, as set out in their Research Implementation Strategy. As set out above, a number of data gaps remain and therefore ASFB could not agree to the development without confidence that damage would not be caused to migratory fish. This will require the developer/Marine Scotland to provide further data on the effects of EMFs and the marine migratory routes and marine feeding areas for Atlantic salmon and sea trout.

Due to the statutory duties of District Salmon Fishery Boards, as a minimum, the following DSFBs should be consulted: River Tweed Commission; Forth DSFB; Tay DSFB; Esk DSFB; Dee DSFB; Don DSFB, Ythan DSFB; and Ugie DSFB. The contact details for these boards can be found at the ASFB website². In addition, the Rivers and Fisheries Trusts in Scotland, provide the Boards with scientific advice and as such, the following Trusts should also be consulted: The Tweed Foundation; Forth Fisheries Trust; Tay Foundation; Esks Rivers and Fisheries Trust; River Dee Trust; River Don Trust; Ythan River Trust. The contact details for these trusts can be found at the RAFTS website³.

If you require any further clarification, please do not hesitate to contact me. In the meantime I look forward to hearing how your clients propose to assess the environmental consequences of this development with regard to migratory salmonid fish.

Yours sincerely,



Dr Alan Wells
Policy and Planning Director

² <http://www.asfb.org.uk/members>

³ <http://www.rafts.org.uk/members/>

Appendix 1: Marine Scotland Science scoping comments in relation to information requirements on diadromous fish of freshwater fisheries interest

Offshore renewable developments have the potential to directly and indirectly impact diadromous fish of freshwater fisheries interest including Atlantic salmon, anadromous brown trout (sea trout) and European eel. These species use the coastal areas around Scotland for feeding and migration and are of high economic and / or conservation value. As such they should be considered during the EIA process. Developers should also note that offshore renewable projects have the potential to impact on fish populations at substantial distances from the development site.

In the case of Atlantic salmon information will be required to assess whether there is likely to be any significant effect of developments on rivers which are classified as Special Areas of Conservation (SAC's) for Atlantic salmon under the Habitats Directive. Where there is the potential for significant impact then sufficient information will be required to allow Marine Scotland to carry out an Appropriate Assessment.

In order that Marine Scotland is able to assess the potential impacts of marine renewable devices on diadromous fish and meet legislative requirements the developer should consider the site location (including proximity to sensitive areas), type of device, and the design of any array plus installation methodology. Specifically we request that developers provide information in the following areas:

1. Identify use of the proposed development area by diadromous fish (salmon, sea trout and eels)
 - a. Which species use the area? Is this for feeding or migration?
 - b. At what times of year are the areas used?
 - c. In the case of salmon and sea trout what is the origin / destination of fish using the area?

2. Identify the behaviour of fish in the area
 - a. What swimming depths do the fish utilise
 - b. Is there a tendency to swim on or offshore

3. Assess the potential impacts of deployed devices on diadromous fish during deployment, operation and decommissioning phases. Potential impacts could include:
 - a. Strike
 - b. Avoidance (including exclusion from particular rivers and subsequent impacts on local populations)
 - c. Disorientation that could potentially affect behaviour, susceptibility to predation or by-catch, or ability to locate normal feeding grounds or river of origin
 - d. Delayed migration

4. Consider the potential for cumulative impacts if there are multiple deployments in an area.

5. Assess 1-4 above to determine likely risk.
 - a. If there are insufficient data to determine use of the development area these should be obtained
 - b. If there are insufficient data on the origin / destination of fish using the area then these should be obtained

6. If there is remaining doubt as to the potential impacts of a particular development, then the developer should recommend a scientifically robust monitoring strategy to assess any impacts either on stocks as a whole, or on particular rivers as necessary.