



Scottish Natural Heritage  
Dualchas Nàdair na h-Alba

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

Linda Rosborough,  
Director  
Marine Scotland

11 July 2014

Send by email to: [Director.ofMarineScotland@scotland.gsi.gov.uk](mailto:Director.ofMarineScotland@scotland.gsi.gov.uk)

Dear Linda

## **FORTH AND TAY WIND FARM PROPOSALS**

SNH & JNCC provided advice on the cumulative impacts of these proposals in our response letter of 7 March 2014. Subsequent to this there have been a number of updates where revisions to the wind farm proposals or developments in assessment methodologies have affected our advice on seabird interests (as listed in the footnote)<sup>1</sup>.

We have had the opportunity to review and discuss aspects of this advice with Marine Scotland, especially where conclusions reached by SNH & JNCC on Special Protection Areas are at variance from those reached by your advisers within Marine Scotland Science. This was done in an effort to understand the nature and origin of these differences, and the extent to which they were germane to the decisions facing Ministers on these cases.

At the recent meeting held on 7 July, we noted that there was agreement between our advisers on the vast majority of the issues raised by these development proposals in terms of their effects on the natural heritage and in particular on protected species of seabird. We noted that there were precautionary elements in the approaches taken and the models recommended by SNH & JNCC, and by

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<sup>1</sup> 15 April 2014 – advice on gannet population modelling and update to threshold

6 June 2014 – advice on draft appropriate assessment for Neart na Gaoithe

10 June 2014 – advice on increased turbine spacing and displacement assessment for Seagreen

17 June 2014 – advice on increased turbine spacing and displacement assessment for Inch Cape

2 July 2014 – collision risk modelling undertaken for updated Seagreen turbine parameters

3 July 2014 – letter (with advice mostly on puffin) following escalation meeting

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INVESTOR IN PEOPLE

Marine Scotland Science. What level of precaution is appropriate is not a matter that can be determined precisely, and judgements have to be made. We also noted that the development proposals have evolved since they were originally submitted, partly as a response to concerns about seabird impacts.

Our advice, and MSS's, is based on thresholds. These thresholds are indicative, not absolute, and we advise that they should not be used as strict limits. Rather, we have based our advice on the principle that the closer effects are to the thresholds the greater the risk of adverse effects. SNH & JNCC concluded that, for a small number of species, levels of predicted impact were such that we are unable to conclude beyond reasonable doubt that there would be no effect on the integrity of the SPAs, based on the models we have used. Marine Scotland Science reached a different conclusion using the same data, but a slightly different modelling approach. We noted that this is a new and fast developing area of scientific study and that approaches are continually developing and being tested. Many of the methods underpinning assessment (such as collision risk modelling) are based on assumptions for which it may take a long time to get field data to provide verification. So again judgements have to be made where empirical analysis is unable to provide certainty.

We discussed the issue of whether decisions should be based on a conclusion that thresholds should not be exceeded or whether an additional element of precaution should be applied to take account of uncalculated elements such as non-breeding mortality or to allow 'headroom' for future development. I note that Marine Scotland Science consider that sufficient other elements of a precautionary nature are built in when setting the thresholds. Setting a 'safety margin' on a threshold would also have to be a matter of judgement and not calculation, so all we can say is that the level of risk that populations will be impacted increases the closer you approach the threshold level.

We also discussed whether, if Ministers judged that on balance it was appropriate to consent these developments, the risks could be reduced further through additional measures. Because of the limitations to our knowledge and understanding of the effects of wind farms on seabirds it is difficult to prescribe very detailed and sophisticated mitigation measures, but we can discuss this further if you wish.

### **Post-consent monitoring**

The Forth & Tay is a unique area hosting an enormous richness of seabird diversity. It could be seen as a flagship for renewable energy generation and a world class opportunity to develop the science and plug evidence gaps in this complex and fast moving area of study. We therefore advise that any consents are made in a way that

facilitates effective monitoring and we have provided Marine Scotland with recommended conditions relating to an environmental monitoring programme and for an expert panel to oversee this work. We think that establishing this approach is a high priority.

The precise scope and specification of the monitoring programme will need to be progressed by the expert panel, under the relevant frameworks being established by Marine Scotland. We recommend that the following aspects should inform the key aims for seabird monitoring in respect of the Forth & Tay offshore wind proposals:

- the avoidance behaviour of breeding seabirds around turbines
- flight height distributions of seabirds at wind farm sites
- displacement of kittiwake, puffin and other auks from wind farm sites
- effects on survival and productivity at relevant breeding colonies

We also believe that post-consent, pre-construction work (in addition to the site characterisation surveys undertaken for impact assessments and Environmental Statements) is vital to enable robust conclusions from monitoring operational wind farms. We recommend that the following work is progressed as a matter of urgency:

- digital aerial surveys
- annual surveys of SPA colony size and productivity
- bird tracking and ringing studies to improve estimates of survival colony counts

SNH and JNCC are currently working up more detailed monitoring ideas in respect of seabird species and marine mammals. We hope to bring forward our suggestions for discussion with Marine Scotland in the next couple of weeks.

Yours sincerely

A handwritten signature in black ink, appearing to read 'I. Jardine', written in a cursive style.

Ian Jardine