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20<sup>th</sup> December 2018

Dear Ms Flaherty

**Electricity Act 1989 (Section 36c).  
The Electricity Generating Stations (Applications for Variation of Consent) (Scotland)  
Regulations 2013.  
The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations  
2017.  
Viking Wind Farm, Shetland - Variation Application**

Thank you for your consultation by email dated 20<sup>th</sup> November over this application and its associated EIA Report.

**Summary**

1. There are natural heritage interests of international importance adjacent to the wind farm, but in our view these will not be adversely affected by the proposed variation.
2. The proposed development will impact on the Shetland population of whimbrel. The predicted effect of the increase in turbine height is displacement of one additional pair of whimbrel. We do not consider this significant. We also note that, following further work undertaken since 2010 to refine the collision risk assessment, the collision mortality for the enlarged scheme is likely to be less than that on which the current consent was based. We accept these revised figures.
3. We also accept that the collision risk to red-throated diver will be less than originally predicted for the consented scheme as a result of the increased avoidance rate now used in the assessment.
4. The increase in turbine size will result in greater impacts on other bird species but none of these changes are significant at the regional or national level.

5. We advise that the proposed variation would increase the magnitude and nature of the landscape and visual impacts of the consented scheme, but do not consider the additional impacts to be of national importance.

**Appraisal of impacts:  
East Mainland Coast, Shetland pSPA**

Our website has details of the legislative requirements for SPAs and all Natura sites (<http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/international-designations/natura-sites/hra-appropriate-assessment/>).

In our view, this proposal is likely to have a significant effect on the breeding red-throated divers which are a qualifying interest of this site. Consequently you are required to undertake an Appropriate Assessment in view of the site's conservation objectives for its qualifying interests.

To help you do this we advise that in our view, based on the information provided to date, the proposal will not adversely affect the integrity of the site. The appraisal we carried out considered the impact of the proposals on the following factors:

1. The consented wind farm forms part of the baseline for selection of the pSPA, therefore only the additional impact resulting from change in turbine size need be considered.
2. We conclude Likely Significant Effect because the increased turbine size would result in greater collision risk to red-throated divers nesting in the vicinity of the wind farm that are associated with the pSPA. The other interests of the pSPA are all non-breeding bird populations which spend winter mainly at sea and so will not be affected by the wind farm.
3. An additional 0.07 collisions per annum are predicted over and above those that would result from the consented wind farm. Of these, 30% (0.021 p.a.) are assumed to be associated with the pSPA. Set against the estimated background mortality for the pSPA population of 58 per annum this represents only a 0.03% increase in mortality.
4. The predicted displacement of an additional pair of divers is the result of an increase in the number nesting in the vicinity of the wind farm, rather than the change in turbine size.
5. The EIA considers the cumulative impact of the Viking variation together with the consented and/or constructed wind farms at Burra Dale, Luggies Knowe (Gremista) and Beaw Field, and the proposed Mossy Hill wind farm. The first two of these pre-date the identification of the pSPA and so form part of the baseline for the site and do not need to be considered. Mossy Hill wind farm is predicted to result in between 0.043 and 0.109 collisions per annum, although the risk is mainly to birds that do not show a strong association with the pSPA. Beaw Field is predicted to result in between 0.031 and 0.104 collisions. In the worst case therefore the two wind farms in combination with the Viking variation would cause an additional 0.234 diver deaths per annum: 0.33% of the natural mortality rate.
6. A number of recent non-wind farm developments may also contribute to the cumulative impact:
  - i) Several mussel farm developments within the pSPA
  - ii) A loading pontoon at Girlsta hatchery, also within the pSPA
  - iii) The proposed decommissioning facility adjacent to the pSPA at Dales Voe.

These developments may cause additional incidental mortality due to birds being displaced from foraging areas, however displacement from the vicinity of mussel farms and the Girlsta pontoon will occur only infrequently when there is activity on the site and is unlikely to significantly restrict feeding. The level of disturbance arising from the Dales Voe development is predicted to be less than the 2016 baseline as it will result in there being fewer shipping movements to and from the base.

You may wish to carry out further appraisal before completing the appropriate assessment.

### **Whimbrel**

Further surveys of whimbrel and reappraisal of flight activity undertaken since 2010 have resulted in a significant decrease in collision risk compared with the previous assessments. In the original ES, the collision risk was reduced by a factor of 50% to account for displacement, which we argued was not appropriate because displacement was already accounted for in the avoidance rate. It is not clear whether this correction has been applied in the current EIA, however we accept that the mortality for the varied scheme is likely to be less than the 3.7 birds per annum that Ministers judged acceptable for the consented scheme.

Whilst the additional mortality arising from the variation is relatively small, and noting that we still disagree with the incorporation of 50% displacement which lowers estimated mortality, we believe that it is likely to significantly exacerbate the risk of a decline in the Shetland whimbrel population.

### **Red-throated diver**

The collision risk for red-throated divers for both the consented scheme and the variation has been recalculated using recent survey data and the current agreed 99.5% avoidance rate rather than 98% used in the original EIA. Although the variation will increase predicted mortality over the revised baseline for the consented scheme, the impact is less than predicted by the original EIA. The current EIA also identifies an additional two pairs of divers at risk of displacement however this is the result of an increase in the nesting population in the area rather than the increase in turbine height.

### **Other bird species**

The EIA predicts that the variation will result in mortality of other birds being increased by between 14.6% and 18.4% depending on species. We do not consider these increases to be significant at the regional level.

We consider that the displacement of golden plover is likely to be underestimated by the assumption that only birds nesting within 250 metres of turbines will be affected. Work at operational wind farms has shown displacement effects out to at least 400 metres. Nevertheless, we do not believe that the additional mortality and displacement as a result of the variation is likely to have a significant additional effect on Shetland golden plover populations.

## **Landscape and visual impacts**

We previously advised that significant landscape and visual impacts would remain from the consented 103 turbine wind farm. The proposed variation would increase the magnitude of these impacts in two respects:

- Increased scale and visibility due to the 10 metre increase in turbine height and corresponding increase in the swept area of the blades.
- Additional impact, particularly at night, resulting from the need for aviation lighting.

We agree with the conclusion of the EIA Report that the first of these is unlikely to result in a significant change to the assessed impact of the consented scheme. As such our previous advice for the consented scheme remains valid.

From the limited visual information presented in the EIA report and experience elsewhere in Scotland of assessing the impacts of aviation lighting, we broadly agree with the level of impacts identified. We consider however that the extent of effects is likely to extend beyond 9km given the wide spread of lighting that will be visible, the potential for overlapping and the difference in nacelle heights typical in many views. Furthermore the uniform overlapping line of turbines on the Mid Kame will have a corresponding line of lights at night, which is likely to be visually striking.

The EIA Report states that radar activated lighting (RAL) is likely to be used to mitigate the effects. We welcome this, especially in the context of the dark sky qualities that the Shetland Islands possess. We understand that the CAA will be publishing a new policy statement on this early in 2019 and that they have accepted the principle of this technology for use in the UK. We also understand that in advance of the policy statement, the CAA is willing to discuss this approach on a case by case basis.

Should RAL not be possible, the addition of lighting will introduce continuous, change into the Shetland landscape for the lifetime of the wind farm. The effect of this change is likely to be significant at the local level but we do not consider that the effects of lighting in isolation (over and above the significance of effects previously consented) raise issues of national importance.

Our previous advice regarding the limitations on the future capacity of the Shetland Islands to accommodate further development due to the scale of the Viking wind farm remain. This is of particular relevance should the continued advancement in turbine efficiencies entail the requirement for larger structures, with associated lighting.

Yours sincerely

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Operations Manager  
Northern Isles and North Highland  
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