TORFICHEN WIND FARM: FURTHER ENVIRONMENTAL INFORMATION TO ADDRESS CONSULTEE RESPONSES TO EIA REPORT ORNITHOLOGY CHAPTER

Final

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ECOLOGY CONSULTING

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1. NatureScot (NS) and Royal Society for the Protection of Birds (RSPB) both raised issues with the ornithology relating to the proposed Torfichen wind farm (the' Proposed Development'). NS stated that the proposal would result in significant adverse effects on black grouse and curlew (and that the suggested mitigation was insufficient to offset these impacts). RSPB objected on the basis of impacts on pink-footed geese associated with the Gladhouse Reservoir and Fala Flow Special Protection Areas (SPA) and cumulative impacts with other wind farms on breeding curlew and wintering pink-footed geese. RSPB also raised concerns about black grouse, the breeding bird assemblage and the outline Biodiversity Enhancement Management Plan (oBEMP). This report will address all these concerns.
2. The oBEMP, as originally set out, covered both habitat and ornithological measures. The formal ornithological mitigation will be delivered off-site. The oBEMP will deliver measures that will benefit the local bird communities, but these do not form a specific part of the ornithological mitigation, as the measures will be delivered within the potential disturbance zone around the wind turbines (advised by NS to be a 500 m buffer). There is insufficient area within the development site outside this zone to deliver the required mitigation on-site.

Pink-footed Geese

3. NS has advised that "*due to the distance between the SPAs and the development site, the low collision risk for geese, and the availability of other foraging habitat, the proposal will not adversely affect the integrity of the sites*" for all the SPAs that could be affected, i.e. Gladhouse Reservoir SPA, Firth of Forth SPA, Fala Flow SPA and Westwater SPA.
4. The RSPB took a different view and objected on the grounds of impacts on designated populations of wintering Pink-footed Geese associated with Gladhouse Reservoir SPA/Ramsar/Site of Special Scientific Interest (SSSI) and Fala Flows SPA/Ramsar/SSSI, and on the cumulative impacts.
5. The RSPB indicated this objection could be removed, but this would require "*Sufficient information be provided to enable an Appropriate Assessment to conclude beyond a reasonable scientific doubt that there will not be an adverse effect on the integrity of the designated Pink-footed goose population associated with the Gladhouse Reservoir SPA and other linked SPAs*."
6. This section of the Further Environmental Information (FEI) addresses the RSPB's concerns and provides further information as requested, including more detail on the evidence base for the conclusions reached.
7. The RSPB quoted recent WeBS data that gave an annual 5-year mean peak count of only 85 birds on Gladhouse Reservoir SPA (from 2017/18 – 2021/22). They initially apportioned all predicted collision mortality (14 per year) to these 85 birds and generated a loss equivalent to 16.47% of the population. It then used the EIAR baseline data for 2021/22 and 2022/23 combined with the WeBS 5-year mean peak for the three previous years to generate a baseline of 1,218 geese. They applied the predicted collision mortality to that population (giving a predicted loss of 1.15% of the SPA population). This approach is, however, fundamentally flawed, as the WeBS data for this site are

unreliable and incomplete. The peak counts since 2017/18 have been (source: https://app.bto.org/webs-reporting/numbers.jsp): 0, 170, no count, 0 (incomplete count), 1 (incomplete count) and 446. The last two years overlap the site baseline surveys, when peak counts of 3,279 and 2,368 were recorded. As concluded in the EIA Report, using more accurate and realistic data gives a clear conclusion of a negligible magnitude effect that would be insignificant in both the context of the Natural Heritage Zone (NHZ) population and the SPA populations (only a 0.2% increase over the baseline mortality): a conclusion NS agrees with.

8. Furthermore, studies at operational wind farms (discussed in TA 9-7 Habitats Regulations Assessment Report) provide additional confidence that collision risk would not adversely affect the integrity of any SPA. Two studies at wind farms in the UK reported empirical avoidance rates of 99.99% (only a single dead goose was recorded at both sites over four years of surveys, Percival *et al*. 2020a, Percival *et al*. 2020b), and a study in Denmark also reported a higher avoidance rate of 99.9% (Drachman *et al*. 2020). The actual number of collisions at the Proposed Development is likely to be only 1-2 collisions per year (compared with the worst-case prediction of 14 per year).

Curlew

9. NS advised that the proposed development would have a significant adverse effect on curlew without sufficient mitigation. One of the two reasons for the RSPB's objections is the cumulative impacts of other consented wind farms on breeding curlews.

10. Both NS and the RSPB indicated their concerns for this species could be addressed through stronger mitigation measures.

Baseline Population and Disturbance Impact

11. Both the RSPB and NS advised that the assessment should use an updated baseline value for the NHZ population, given the ongoing regional decline, i.e. 1,220 pairs rather than the most recently published value of 1,400 pairs (Wilson *et al*. 2015) that was used in the EIA Report. This would increase the percentage of the NHZ population within the 500 m potential disturbance zone from 4.3% to 4.9%. It should be noted the conclusion reached in the assessment would remain the same: "*as this population forms a key part of a nationally important breeding bird community and this effect would last for the lifetime of the Proposed Development, it was concluded that this effect would be significant in the absence of mitigation*."

12. The changed baseline population would increase the proportionate mortality in the NHZ population. The predicted collision risk of 1.07 birds per year would change from a 0.09% increase over the baseline mortality to 0.10%. This is still a negligible magnitude effect that would not be significant.

13. It should also be considered that this represents a worst-case assessment of complete displacement from a 500 m buffer around the turbines. In reality, the disturbance effect on curlew is likely to be less, given evidence from existing wind farms. Pearce-Higgins *et al.* (2009) reported a reduction in curlew density up to 800 m from wind turbines, but only partial displacement equivalent to a 42% reduction within 500 m. A similar effect occurred during construction in a later study (Pearce-Higgins *et al.* 2012), but there is a lack of other published studies that quantify disturbance effects on curlew. There are, though, many examples of curlew breeding within wind farm sites (not only from Fallago Rig) including: Green Rigg (Open Space 2015), Kelburn (Percival *et al.* 2021), Minnygap (Percival *et al*. 2019), Knabbs Ridge (Percival and Percival 2010), Forss (RES 2010), Solwaybank (RES 2022), Burnfoot Hill (Wind Prospect 2011) and Caton Moor (Wind Prospect 2002), which all support the conclusion of only a partial displacement from wind turbines.

Cumulative impact

14. NS noted that the cumulative assessment for curlew excluded other land use proposals, such as woodland creation, which could increase mortality or cause displacement/disturbance. RSPB objected on the specific grounds of cumulative impact on curlew, suggesting that mitigation for this species should be revised (and the site design should be re-considered to avoid higher-density curlew areas).

15. Whilst a more detailed cumulative assessment could be undertaken, the lack of available baseline data and quantified impacts would mean that such an assessment would be unlikely to yield useful information. Rather, the cumulative issue will be addressed by ensuring that the mitigation measures implemented for the Proposed Development can deliver a net gain to curlew and hence have a positive overall impact on the NHZ. Further details of how this will be achieved are set out in the Ornithological Management Plan, including specific measures to develop a regional curlew conservation strategy.

Mitigation

16. Mitigation for curlews will be delivered off-site. When available, further details on what has been agreed will be provided. The objective is to develop and implement a regional plan for breeding curlew and other upland waders, working collaboratively, where possible, with other interested parties, including the RSPB, the Tweed Forum and the Southern Uplands Partnership. Consultation with these organisations is currently ongoing, and a copy of initial correspondence with RSPB is provided as Annex A. There would be three components:

    - **Conservation Planning** – to develop a strategy for the optimal delivery of conservation measures across the region.
    - **Conservation Action** – to implement direct measures that benefit the regional curlew population, such as wetland habitat creation, peatland restoration, upland grazing management and predator control/management.
    - **Monitoring** – to determine baseline curlew distribution and abundance, which will be used to identify suitable areas for conservation management, set targets and assess management progress.

17. This could follow a similar approach to that adopted for the Quixwood Wind Farm mitigation under the Tweed Forum, the 'Borders Wading Bird Initiative ' – to create and manage wetland habitat for wading birds.

18. Turbine removal/relocation (as suggested by the RSPB) would be ineffective given the widespread and generally even distribution of curlew across most of the site.

Black Grouse

19. NS stated the EIA Report understated the impacts of the Proposed Development on black grouse, and three lek sites could be affected. However, as stated in the main EIA Report chapter and as shown in EIA Report Figure 9-5, only two lekking areas were recorded during the baseline surveys. The confusion around a third lek arose because of an error in Figure 20 in TA 9-2, where a record of a single male black grouse was erroneously plotted as a lek. Contrary to the claim by NS that black grouse was improperly assessed as a key species, that part of the assessment simply identified that no black grouse were recorded as breeding within 500 m of the wind turbines (and the scheme was designed to avoid leks by 500 m).

20. It should be noted that 500 m (the minimum separation distance used in the Proposed Development's design process) is a precautionary buffer, with effects on any leks outside that zone

unlikely. Zwart *et al.* (2015) reviewed data from 7 black grouse leks in proximity to wind turbines across Scotland and found no effect on black grouse leks more than 500 m from turbines. Leks within 500 m shifted away from turbines, but showed no evidence of any population impact (though 6/7 sites implemented HMP to mitigate effects on grouse, as would be implemented at the Proposed Development site). Coppes *et al.* 2020, in a wider review of grouse and wind turbines, also reported grouse were affected up to distances of 500 m, though noted "*indications of effects also at bigger distances*" in other grouse species. LeBeau *et al.* (2020) reported that grouse habitat selection, lek attendance and survival were adversely affected by wind turbines, but the magnitude was generally small and variable. With no turbines within 500 m of any black grouse lek, construction timing restricted to avoid the main lekking times and enhanced BEMP measures to benefit black grouse, there would be no significant impact of the Proposed Development on this species. However, a net gain to black grouse would require further measures, which will be delivered through a contribution to the Southern Upland Partnership Black Grouse Project.

21. NS noted no consideration of the cumulative impacts of other developments or forestry in the area, e.g. the adjacent Carcant Wind Farm already in operation and the proposed wind farm project at Wull Muir. The position on cumulative impacts on black grouse is essentially the same as that for curlew. A more detailed cumulative assessment could be undertaken, but the lack of available baseline data and impacts would mean it would be unlikely to yield useful information to inform the assessment further. The cumulative issue will be addressed by ensuring that the mitigation measures implemented for the Proposed Development deliver a net gain to black grouse and a positive overall impact of the scheme on the NHZ.

22. Mitigation for black grouse was raised as an issue by both NS and RSPB. NS asked for greater detail on the nature and scale of the proposed contribution to the Southern Upland Partnership Black Grouse Project. The Applicant has initiated discussions with the Southern Uplands Partnership about this mitigation and further details on what is agreed will be provided when available.

Breeding Bird Assemblage

23. The RSPB notes the EIA Report identifies a nationally important breeding bird assemblage and states the impacts of the proposal should be assessed on this basis. The EIA Report has, though, fully assessed the effects on each of the key components of this assemblage. Additionally, though the assemblage is of SSSI quality, it has not been designated as such, so it is not a material planning consideration.

Breeding Bird Protection Plan (BBPP)

24. NS recommended updating the Breeding Bird Protection Plan. During April and May, a 750 m buffer from black grouse leks is applied, where construction activity (including vehicle movement along tracks) will be prohibited before 9 am. This was incorporated into the updated BBPP (see Appendix 7 of the Additional Information Report).

Monitoring

25. The RSPB suggested that the oBEMP should include bird monitoring during wind farm operation, so a proposed monitoring programme is included within the updated oBEMP. The RSPB recommended a Biodiversity Management Group overseeing the implementation of the BEMP, which will be adopted.

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Annex 1 – Longcroft and Torfichen Wind Farm RSPB Consultation Letter

SLR Consulting Limited

12 June 2024

Attention: Sarah West
RSPB
Via email only

SLR Project No.: 405.064862.00001

Client Reference No.: Longcroft Wind Farm

RE: ELECTRICITY ACT 1989: APPLICATION FOR SECTION 36 CONSENT FOR THE PROPOSED LONGCROFT WIND FARM IN THE PLANNING AUTHORITY AREA OF THE SCOTTISH BORDERS COUNCIL (ECU00004774)
RSPB APPLICATION RESPONSE

Dear Sarah,

Introduction

I write in response to RSPBs response dated 07 February 2024 in respect of the above.

The following information has been prepared in response to the various points raised in your response, and for the ease of reference we have structured our response in a similar manner to your response and used your headings.

We note that the NatureScot (NS) response was received by the ECU dated 26th January 2024. In their response to ornithological elements, they noted that they had some concerns around some shortcomings in the ornithological assessment but concluded that they *"do not think that the overall impacts on birds are likely to be significant enough to warrant revisiting the assessment".*

With regard to cumulative assessment, whilst NS stated that whilst the cumulative assessment should have included the entire NHZ within NHZ20 and that they would have liked to have seen a wider cumulative assessment of other species, they concluded that *"given our awareness of the wider ornithological information, we do not consider cumulative effects a major concern".*

We note that a similar response from RSPB has also been submitted for the nearby Dunside Wind Farm proposal, whilst the RPSB had no comments to make on the Newlands Hill Wind Farm proposal, also located nearby.

To this end, our response has been focused on the end goal of what can be achieved in terms of habitat enhancement and net benefits, rather than on proposing to revisit/undertake extensive cumulative modelling for a large NHZ that would likely not change the conclusions of the ornithological assessment.

We have provided some initial elements which we would like to discuss with RSPB and any other relevant stakeholders (Scottish Borders Council, NS and potentially with other nearby wind farm developments) and engage further with RSPB to agree a positive way forward and outcome for the potentially affected species.

Curlew

Cumulative Collision Risk and Impact Assessment

We note RSPBs request for a revised cumulative disturbance and collision risk impact assessment be undertaken with regards to Curlew be undertaken.

Whilst these cumulative assessments could be undertaken, the results are likely to be severely limited by the availability of data from other developments across the NHZ and would be unlikely to change the conclusions of the assessment. We agree with NS's position that cumulative ornithological impacts are not a major concern. This conclusion is reinforced further by the positive measures that the proposed development will deliver for Curlew.

Instead, we would propose that a revised outline biodiversity enhancement and restoration (oBERP) be produced prior to determination, which will include details of plans to enhance local habitat for breeding Curlew (and deliver enhanced predator control). Given the nature and current (and continuing) use of the overall site (in terms of management for shooting and sheep grazing), it is unlikely that this alone will be sufficient to deliver a net benefit. Therefore, the applicant (RES) will also implement measures to deliver wider benefits for Curlew across the NHZ. These benefits could be delivered through the development and implementation of a regional curlew management plan. Together, this would ensure that the proposed development delivers a net benefit to Curlew, so would not contribute to any adverse cumulative impact.

We would be happy to discuss this further with RSPB to gain your thoughts around any existing or proposed enhancement projects in the region, and to understand if there are any suggestions that the RSPB would like to make into the nature, extent and development of such a plan.

Red Kite

Cumulative Collision Risk Assessment

Similar to Curlew, we suggest that whilst a cumulative collision risk assessment could be undertaken, the results of which would likely be severely limited by the availability of data from nearby wind farms.

We believe that it would be better to deliver measures that would mean the proposed development does not contribute to any cumulative risk through collision reduction measures, such as removing carcasses (a key Red Kite feeding resource), and through habitat enhancement outside the site, such that the proposed development delivers a net benefit for the species.

RES are content to agree to the proposed protocol for collision reporting.

Merlin

We note that RPSB request that turbines within 500m of a Merlin nest be moved. However, it is known that Merlin as a species move nest sites regularly (and indeed have done so at this site between 2022 and 2023). We would therefore propose an alternative approach, i.e. delivering a net benefit through local habitat enhancement. Merlin would, therefore, be a key species for the revised oBERP.

RES agree that post-construction monitoring should include this species.

Golden Eagle

Cumulative Impact Assessment

We note RSPBs request for a cumulative impact assessment of operational displacement be undertaken with regards to Golden Eagle. However, we do not consider that such additional assessment is necessary, given that the site does not fall within an occupied eagle range but rather has only been used by transient birds from South Scotland Golden Eagle Project release programme. Given this, and taking into account NS's comments, we would propose that instead, the end goal of any enhancement/mitigation will be to ensure that the proposed development delivers a clear net benefit to Golden Eagle. This could be done via a contribution to the South Scotland Golden Eagle Project, which would enable resources to be allocated more effectively across the region, such that the scheme would therefore result in a positive benefit and would not contribute to any adverse cumulative effects.

We would be happy to discuss this approach further with RSPB to gain your insights into the potential for this approach, and to understand if there are any suggestions that the RSPB would like to make into the nature, extent and development of such a plan.

Delivering Mitigation and Biodiversity Enhancement

RSPBs comments are noted with regards to the oBERP and confirm that RES is content to accept a suitably worded planning condition to ensure that habitat management and enhancement is delivered as part of the proposed development.

We also intend to submit a revised oBERP prior to determination in order to address the various points raised.

Proposed Enhancement Measures for Identified Species

oBERP

Based on the comments from RSPB made in their response, and our initial considerations of the response, and in line with the commitments made in the oBERP, it is proposed to submit a revised BERP ahead of determination. RES would be pleased to engage separately with RSPB to develop suitable mitigation methods/schemes and the acceptability of how the schemes can be delivered/funded (if wider regional projects).

oBERP - Broadleaved Trees

We note RSPBs comments regarding the planting of native broadleaf trees around existing shelterbelts and confirm that this planting would be targeted to avoid existing open ground habitat used by waders.

oBERP – Owl Boxes

Comments are noted. Provision of barn owl nesting boxes will be deleted from the revised oBERP.

Outline Breeding Bird Protection Plan (oBBBP)

We note the updated requirement to limit nest checks to 4 visits to minimise disturbance, and the request to update the oBBBP to ensure that recommended disturbance buffers and accepted survey methods are followed at all times. To clarify, the proposed fortnightly nest checks were for ground-nesting birds in areas where any new groundworks were scheduled in the next fortnight, so that damage to any active nests would be avoided. Surveys for Schedule 1 species would be undertaken primarily by observing from a distance, to avoid any possibility of disturbance. This would be clarified in the revised oBBPP.

We also propose to update the oBERP to include measures for Golden Eagle, Curlew, Red Kite, and Merlin, including pre- and post-construction monitoring for these species.

Proposed Combined Ornithology Action Plan for Longcroft and Torfichen Wind Farms

Since the application for the proposed development was submitted, RES has also submitted an application for Torfichen Wind Farm. That site also supports important breeding wader populations.

There may be the possibility of a combined Ornithology Action Plan covering both Longcroft and Torfichen Wind Farms (and potentially develop a framework for other developments to also become involved, as has been successfully developed for Golden Eagles in Highland region, for example). Our initial thoughts are that this may take the following approach:

1. Further refinement of OBERP to deliver local benefits to key species where feasible/deliverable:
    - Habitat measures;
    - Predator control; and
    - Carcass removal (to reduce the attractiveness of the site and hence collision risk for Red Kites and Golden Eagle)
2. Development and implementation of a regional plan for breeding Curlew and other upland waders (both sites) and the identification of the most appropriately placed organisation(s) to deliver the plan.
3. Contribution to South Scotland Golden Eagle Project.
4. Contribution to the Southern Uplands Partnership (SUP) Black Grouse project (Torfichen)

We would propose to engage further with RSPB with regards not only the Longcroft specific application responses contained within this letter, but also on the potential of a wider action plan covering both wind farms as described above. However, given the independent nature of the two schemes the client would not be able to accept a condition that was dependent on the other scheme being consented.

We would therefore like to arrange a meeting with RSPB and any other relevant parties to discuss these matters further, if possible (either in person or over Teams).

Yours Sincerely

SLR Consulting Limited

Tim Doggett, Principal EIA Project Manager

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cc James Cameron (james.cameron@res-group.com)