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Client Name: **Galileo Empower**

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Site Name: **Corr Chnoc Wind Farm**

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Review of Secondary Vantage Point Survey Locations (v3)

Background

Avian Ecology Ltd (AEL) was commissioned to undertake a review of Vantage Point (VP) survey locations established and surveyed by SLR over the 12-month period September 2025 – August 2026 in order to record bird flight activity in association with Galileo Empower's proposed Corr Chnoc Wind Farm (the 'Proposed Development'), located on land at the western end of Glen Lonan, Argyll and Bute.

It is understood from information provided by Galileo Empower, that these 'secondary' VP locations were identified to replace those which were originally selected and surveyed during the 24-month period March 2022 to February 2024 to inform the initial application for the Proposed Development, following comments from NatureScot regarding perceived limitations in their suitability. It is also understood that there were initially three secondary VPs, but that an additional 4th VP was introduced mid-way through the 12-month survey period following a request from NatureScot to achieve fuller coverage of the rotor swept area of turbine 11 and the airspace at rotor-swept height immediately to the east of it.

This review is based upon the adequacy of the secondary VP locations in terms of achieving their purpose of recording appropriately representative bird flight activity data within an appropriate flight activity survey area[1], to inform collision risk modelling, and conformance with relevant NatureScot bird survey guidance (NatureScot, 2025[2]). The review also considers whether the introduction of the additional 4th VP is necessary in adequately meeting these requirements.

It is not within the scope of this review to comment on any other aspect of the flight activity surveys, such as their temporal coverage or the avoidance of simultaneous surveys from overlapping VPs, which are assumed to have been conducted in accordance with the NatureScot bird survey guidance. It is also not within the scope of this review to comment on the results of the secondary VP surveys or draw on any comparisons with the findings of the original flight activity surveys.

[1] The flight activity survey area is defined as the outer-most proposed turbines plus a surrounding buffer of 500m, as defined in the NatureScot bird survey guidance.

[2] NatureScot (2025). *Recommended bird survey methods to inform impact assessment of onshore windfarms. Updated March 2025*. NatureScot, Inverness.

Information Provided

In order to conduct this review, Galileo Empower has provided AEL with a chain of e-mail correspondence between Galileo Empower and Savills, their planning co-ordinator for the Proposed Development, and NatureScot between 5th January and 8th April 2026. In that correspondence, Galileo Empower/Savills set out the proposed approach to capturing an additional year of flight activity surveys from the alternative suite of three secondary VPs, to which NatureScot recommended inclusion of a 4th VP in order to achieve fuller coverage of the rotor swept area of Turbine 11 and the airspace at rotor-swept height immediately to the east of it, as referred to above. NatureScot also advised that a full 12-months of survey effort would need to be completed at the 4th VP, thereby extending the overall additional survey period by 6 months.

AEL were also provided with a letter and accompanying figures submitted by SLR to NatureScot on March 20th 2026 which sets out the rationale to the selection of the secondary VPs and the adequacy of their coverage of the flight activity survey area (or Collision Risk Analysis Area (CRAA) as referred to in SLRs letter[3]), particularly in the absence of the additional 4th VP. The accompanying figures showed:

- the locations and viewsheds of all four secondary VPs, referred to as VPs 1B, 2B, 3B and 4 (Figure 1)[4];
- the original and subsequently adjusted location and viewshed of VP 2B, referred to as v1 and v2 respectively (Figure 2); and
- a wireline figure showing the visibility of turbines and their associated rotor-swept areas as seen from VP 2Bv1.

Galileo Empower also separately provided AEL with a wireline figure showing the visibility of turbines and their associated rotor-swept areas as seen from VP 2Bv2.

Acceptability of VP Locations

From review of Figures 1 and 2, all four secondary VPs (including VP 2B (v2)) appear to have been located in accordance with the NatureScot bird survey guidance, being sited outside the flight activity survey area, or at the very least outside of the proposed turbine layout, with all VPs being located at least 300m from the nearest turbines. They also do not appear to be sited on top of prominent hill tops, where surveyors may be more visible to birds, and are instead located below hill summits, as was confirmed to NatureScot in the e-mail correspondence between 5th January and 8th April 2026 (e-mail of 15th January 2026).

It was also confirmed to NatureScot in the e-mail correspondence between 5th January and 8th April 2026 that the secondary VPs had been selected in locations which were not near to

[3] The CRAA is stated as comprising a '500m + rotor radius buffer around turbine locations'. It is assumed that this is equivalent to the turbine envelope stated in NatureScot collision risk modelling guidance which is described as comprising 'an area with radius equal to the rotor length plus 500m, extending from each turbine'.
[4] These VPs are referred to as VPs 8, 9, 10 and 11 in the 2026 Ornithology AI submission.

sensitive sites for target species (i.e. nest, roost or lek sites) in accordance with the NatureScot bird survey guidance (e-mail of 5th January 2026).

Alteration of VP 2B

In their letter to NatureScot, SLR identify that the location of VP 2B was altered by approximately 200m from position v1 to position v2 from March 2026. Thus, the first six months of survey effort was completed from VP 2B v1 (September 2025 – February 2026) and the second six months of survey effort was completed from VP 2B v2 (March 2026 to August 2026).

NatureScot guidance states that VP locations should be used on successive watches and that changing the VP location complicates the collision risk model. However, changes such as the alteration from VP 2B v1 to VP 2B v2 do sometimes occur over the course a project's baseline surveys and such a change can be accommodated when undertaking collision risk modelling. It is outwith the scope of this review to examine the detail of the modelling methods used to determine collision risk, but the change in the VP location is not considered to be a limitation.

Appropriate Visibility of the Flight Activity Survey Area

In the e-mail correspondence between Galileo Empower/Savills and NatureScot (5th January and 8th April 2026), NatureScot advise that they were not content with the viewshed coverage of the initial three secondary VPs. Specifically, they were concerned with the coverage of the rotor-swept airspace associated with Turbine 11 and a small gap in the viewshed coverage to the north east of that turbine such that the detectability of birds flying through the associated airspace may have been reduced.

In their response letter, SLR confirm that the visibility of the airspace from 38m above ground level (that being the lowest rotor swept height of the proposed turbines) from the initial three secondary VPs combined covers 87.2% of the flight activity survey area/CRAA and over 92% of the at-risk airspace volume (i.e. the three-dimensional airspace within the rotor-swept area of the CRAA (38m – 200m above ground level)). This is based on the inclusion of VP 2B v2 and the modelling of visible airspace from each VP viewshed from 38m above ground level, as presented in Figures 1 and 2.

When selecting VPs, the NatureScot bird survey guidance states that '*the aim should be to cover all the flight activity survey area such that no point is greater than 2km from a VP*' but that '*It is very important that VPs are chosen to achieve maximum visibility with the minimum number of points*'. In acknowledging these principals, it is entirely common for viewshed coverage of the flight activity survey areas associated with proposed development sites not to achieve 100% coverage, due to reasons including topography, forestry cover, land access with any such omissions in coverage being balanced with the proportionality of requiring additional VPs to cover small residual gaps in coverage. This is particularly so when considering that the suitability of potential VP locations surrounding the Site was constrained by known eagle perching spots, including some of the original VP locations, as alluded to in the e-mail correspondence between Galileo Empower/Savills and NatureScot (15th January 2026). In this context, coverage of 92% of the at-risk airspace volume is

considered to be a good level of coverage and is deemed to be in accordance with what is considered to be an acceptable level of coverage based on the precedence from a long history of other projects in similar settings/contexts.

Additionally, SLR provide evidence relating to the visibility of turbines and their associated rotor-swept areas, including Turbine 11 (which NatureScot raised concerns over), from VP 2B in the accompanying wireline figure to demonstrate that the full rotor swept area of Turbine 11 is clearly visible from that VP. The small gap in the viewshed from VP 2B (v1) beside Turbine 11 results from a small knoll located to the south east of Turbine 11 and between it and the VP as well as a gully beyond, but it is clear from the wire line figures that any birds flying in the rotor swept area of T11 would be entirely visible to a surveyor at VP2B (both V1 and v2).

The combined viewsheds from the initial three VPs all appear to adequately cover the rotor swept areas around all of the other proposed turbines.

It is therefore considered that the viewsheds of the initial three secondary VPs combined were adequate in achieving appropriate coverage of the flight activity survey area with the least number of VPs, thereby conforming with the relevant NatureScot bird survey guidance. The addition of the 4th VP in February 2026 does no harm to the survey effort but was not needed to enable appropriate survey coverage.

Conclusion

Based on this review, it is considered that locations and coverage of the initial three secondary VPs conformed with the relevant NatureScot bird survey guidance and were adequate in permitting the recording of appropriately representative bird flight activity data within the flight activity survey area to inform collision risk modelling. Hence, it is also concluded that the introduction of the 4th VP was not necessary in order to meet these requirements.

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