Speyside Business Alliance

Dorenell Windfarm

Siting and Design Hearing Statement

Mark Steele Consultants

September 2010

1.0 Introduction

1.1 Hearing Statement Scope

1.1.1 This Hearing Statement relates to the landscape and visual aspects of the siting and design of the Dorenell Windfarm. However the main focus will be on the design of the windfarm and its relationship with the site and its immediate environs (as siting will also be addressed in the Inquiry evidence).

1.1.2 This Statement is based upon the information in the Environmental Statement (ES) as well as a review of relevant guidance (in particular *'Siting and Designing Windfarms in the Landscape – December 2009'* published by SNH) supported by visits to the site and its environs.

2.0 ES Design Process

2.1 Evolution of the Dorenell Wind Farm Design in Response to Public Feedback

2.1.1 ES paragraph 5.37 states that *'The following key layout changes occurred throughout the EIA process in response to the key concerns of "how the wind farm will look and effects on wildlife":*

- *To minimise landscape and in particular visual effects, wind turbines have been removed or relocated;*
    - *where they could be seen from key design viewpoints on prominent hilltops;*
    - *where they overlapped causing visual confusion;*
    - *where they appeared visually unbalanced or overwhelming; and*
    - *where they created gaps in the wind turbine layout or appeared as outliers...'*

2.1.2 This ES statement does not confirm the selection of the *'key design viewpoints on prominent hilltops'* (the ES illustrates the iterative process in Figures 6.11 to 6.13 using Viewpoints 1, 13 and 21 none of which are on hilltops) however it is noted that the turbines are visually prominent when viewed from the following ES hilltop viewpoints;

- Viewpoint 6 - Tap o' Noth;
- Viewpoint 11 - Little Geal Charn;
- Viewpoint 18 - Ben Rinnes; and
- Viewpoint 22 - Ben Aigan

In addition the turbines will be even more visually prominent when viewed from hilltops not selected as ES Viewpoints such as;

- Corryhabbie Hill;
- Dead Wife's Hillock;
- The Scalp; and
- The Buck.

Indeed there will be very few hilltops within the vicinity of the development that will not have prominent views of the proposed turbines. The design process has therefore failed to minimise effects.

2.1.3 Overlapping and consequential visual confusion are demonstrated by the ES visualisations such as those from:

- Viewpoint 3 – A941 Balloch;
- Viewpoint 11 – Little Geal Charn; and
- Viewpoint 22 – Ben Aigan.

In addition overlapping and visual confusion would be expected from other viewpoints such as:

- Corryhabbie Hill;
- Dead Wife's Hillock;
- The Scalp;
- The Buck;
- Glen Fiddich; and
- The Black Water valley

The design process has therefore failed to minimise overlapping and consequential visual confusion.

2.1.4 The ES fails to include Viewpoints in close proximity to the wind farm where the turbines could be perceived as *'overwhelming'*. The turbines would be potentially overwhelming from viewpoints such as;

- Corryhabbie Hill;
- Dead Wife's Hillock;
- Glen Fiddich; and
- The Black Water valley.

The design process has therefore failed to properly take account of viewpoints that might be *'overwhelmed'* by the turbines.

In addition a judgement as to the balance of the composition of turbines in the view is limited by the absence of closer viewpoints. However the lack of balance in ES Viewpoint 3 suggests that this has not been resolved by the design process.

2.1.5 The design process has failed to eliminate perceived '*outliers*' from the main group of turbines:

- Viewpoint 3 – A941 Balloch: the turbine tips to the right of the windfarm appear as outliers to the main group;
- Viewpoint 6 – Tap o' Noth: the two turbines to the right of the windfarm appear as outliers to the main group;
- Viewpoint 9 – A941 Upper Howbog: the three/four turbines to the right of the windfarm appear as outliers to the main group; and
- Viewpoint 11 – Little Gean Charn: the turbine to the left of the windfarm appears as a marginal outlier to the main group.

It should also be noted that turbines may appear as outliers in other views not selected as ES viewpoints.

2.2 Review of Influencing Factors

2.2.1 ES paragraph 6.40 lists the factors that influenced the design objectives of the Dorenell Windfarm. These include:

- '*the large size of the site and the capacity to avoid sensitive areas and provide significant buffer areas;*'

The site is located within an Area of Great Landscape Value (AGLV) which is a sensitive landscape resource.

- '*landscape especially local public opinion, tourism interests and the proximity of the Cairngorms National Park;*'

The AGLV extends into the Cairngorms National Park and the site is located on a spur of higher ground that is contiguous with the topography of the National Park. Therefore there is neither a self evident topographical boundary to the National Park nor a diminution of landscape quality (or recreational potential) beyond the National Park boundary.

Furthermore turbines are proposed within 2km of the National Park boundary and the greatest concentration of turbines is located to the south of the development site in closest proximity to the National Park.

- *'EIA regulations and the need to mitigate significant impacts;'*

The siting and design of the Dorenell Windfarm will result in significant landscape impacts upon the AGLV, the Cairngorms National Park and the setting of the National Park as well as significant visual impacts upon users of this landscape resource.

2.3 Development of Site Specific Design Objectives

2.3.1 ES paragraph 6.43 states that *'The landscape and visual design commenced with the following design principles, as per SNH Guidelines for LVIA.'*

It should be noted that the SNH guidance used in the ES has been superceded by *'Siting and Designing Windfarms in the Landscape'* published by SNH in December 2009. The ES design principles identified in ES Table 6.4 will be discussed with reference to the current guidance.

2.3.2 Design concept D1 states *'Create a simple and clear feature with a cohesive arrangement of elements.'*

The wind farm does not appear similar from different viewpoints (ES Viewpoints 3 and 11) and does not relate well to the surrounding landform (it extends from one valley floor over the ridgeline and into the adjacent valley).

As previously discussed there are overlapping turbines and outlying turbines in some views. In addition and due to varying elevation the turbines 'disappear' behind skylines.

2.3.3 Design concept D2 states '*Create a compact focal feature with a clearly definable edge.*'

The turbine layout does not read as a compact feature in some views (Viewpoints 6, 9 and 11) and will be seen cumulatively with other wind farms (to be discussed in Inquiry evidence)

2.3.4 Design concept D3 states '*The wind farm should relate to the character of the landform, not seeming to dominate or overwhelm the underlying physical characteristics.*'

The ES does not include any viewpoints within close proximity of the windfarm, however it is likely that the windfarm will dominate and overwhelm the landscape characteristics of the Black Water Valley and Glen Fiddich.

2.3.5 Design concept D4 states '*View the wind farm as a distant isolated feature within a large scale landscape.*'

The majority of the ES viewpoints are distant from the proposed windfarm and therefore give the impression of '*a distant isolated feature within a large scale landscape.*' No ES viewpoints illustrate the variations in landscape characteristics between the Black Water Valley (broad and open) and Glen Fiddich (narrow and deeply incised). This is illustrated by Appendix Document Figure 2, Photographs 2 and 4.

This design concept states that '*The wind farm should be located so that it does not appear upon the most elevated ground within the area...*' This is

not a position endorsed by the current SNH guidance and would seem to be 'making a virtue out of neccessity' as development on higher ground is constrained by the requirements of the Buchan Radar as well as Class 1 habitat and wader breeding areas.

2.3.6 Design concept D5 states *'The wind farm should appear within a windy and exposed landscape.'*

This design concept is facile as it is unlikely that any wind farm would be proposed that was not in a '*windy landscape*.'

2.3.7 Design concept D6 states *'The wind farm should relate to and compliment other focal features within the landscape and avoid encroaching upon neighbouring areas of contrasting character.'*

The neighbouring landscape is characterised by prominent and in some cases isolated hilltops (The Buck, Tap o'Noth and Ben Rinnes). The proposed wind farm will compete with (and in some cases partially screen) rather than compliment these focal features. A focal feature within 1km of the proposed turbines is the visually arresting geology of Carn na Bruar (Appendix Document Figure 7 Aerial Photograph 5).

2.3.8 Design concept D7 states *'Associated structures should relate positively to wind farm design and layout as well as to landscape character.'*

The structures associated with the turbines are the tracks, construction compound, substation and borrow pit. The ES discusses the design iterations for the tracks in some detail however the location and mitigation of other features is not addressed.

Despite the design of the tracks they will nevertheless be visually prominent when viewed from elevated ground surrounding the site (which is not illustrated in the ES)

The substation will be a large industrial feature that will be potentially implemented to match the generic drawing used in the ES (an aerial photograph of the Crystal Rig Windfarm substation is included in the Appendix Document Figure 2 Photograph 3a). It is also located so that it does not *'relate to the collective wind farm development'* at a key point of access used by walkers and cyclists (Appendix Document Figure 2 Photograph 3) and will be highly visually intrusive. This visual intrusion will be compounded by the borrow pit quarry that will be excavated nearby.

The construction compond is located adjacent to the Black Water Lodge. Whilst the lodge is unoccupied, the buildings and associated trees form a picturesque focal point within the valley (Appendix document Figure 2 Photographs 1 and 2) that will be compromised during the construction phase.

2.3.9 Design concept D8 states *'The wind farm should appear as a temporary structure that is 'superimposed' within the landscape.'*
This is another rather facile design concept as a development of this scale will always appear permanent, indeed given the level of investment in infrastructure it is reasonable to expect that a renewal for planning permission will be sought in due course.

2.4 Optimisation

2.4.1 The title of this ES section perhaps betrays the main motivation behind the design process – to maximise the number and size of turbines delivered

within site constraints. This is further demonstrated by Figure 6.10 which shows the four stages of design optimisation:

- 101 Turbines – *'Original layout with maximum number of turbines based on turbine separation';*
- 88 Turbines – *'Turbine layout optimised for slope analysis i.e. steepness';*
- 71 Turbines – *'Turbine layout optimised for hard environmental and engineering constraints including: Buchan radar no-go areas, breeding bird areas (including buffers), Habitat Class 1 areas, peat slide risk, peat depth and watercourse buffers';* and
- 59 Turbines – *'Turbine layout optimised for landscape and visual factors. This is the final turbine layout.'*

The methodology used in the ES can thus be seen to be 'design by default' where the site is initially saturated with a maximum number of turbines which are then progressively deleted where they conflict with site constraints. This is not design development; it is simply an acknowledgment of site constraints. The final stage involves the removal or micrositing of turbines to reduce landscape and visual impacts below a level judged necessary to secure approval. Therefore the final layout has not been designed as such and is just a 'least worst case' layout arising from site constraints rather than positive design.

The design process should firstly establish the site constraints (without reference to turbine size or position) and then explore different layouts and designs for the unconstrained site areas that respond to landscape form and character. This design led approach is advocated by the new SNH guidance and is illustrated in Appendix 1 of *'Siting and Designing Windfarms in the Landscape – December 2009'*.

2.4.2 ES paragraph 6.52 states that a *'...reduction of turbine height by up to 50m would not result in any reduction in significant landscape and visual impacts. This was largely because the landscape is very large in character, yet contains few definitive size indicators upon the site, so a reduction of size would generally be unperceived without direct comparison with a larger machine.'*

A reduction in height would reduce landscape and visual impacts as some turbines currently visible in ES visualisations would drop below the horizon if a smaller turbine were used (such as Viewpoints 1, 3, 8, 14, 19 and 21).

In addition the ES viewpoints are distant from the proposed windfarm which inevitably makes scale comparissons less obvious. The scale will become more apparent with proximity (as is illustrated by Viewpoint 3) and when size indicators such as Black Water lodge are present in the view (Appendix Document Figure 2 Photograph 2) or where turbines are viewed from elevated positions where landform height will provide a comparator.

8.0 Conclusion

8.1 Summary

8.1.1 It is concluded that the design process is flawed as:

- effects are not minimised and there will be very few hilltops within the vicinity of the development that will not have prominent views of the proposed turbines;

- overlapping and consequential visual confusion is not minimised. In addition and due to varying elevation the turbines also 'disappear' behind skylines;
- viewpoints that might be '*overwhelmed*' by the turbines are not assessed. In addition a judgement as to the balance of the composition of turbines in the view is limited by the absence of closer viewpoints;
- perceived '*outliers*' from the main group of turbines are not eliminated;
- the wind farm does not relate well to the surrounding landform;
- the turbine layout does not read as a compact feature in some views and will be seen cumulatively with other wind farms;
- the wind farm will compete with (and in some cases partially screen) rather than compliment existing focal features;
- the substation and borrow pit are poorly located and do not '*relate to the collective wind farm development*';
- a reduction in turbine height would reduce landscape and visual impacts; and
- the final layout arises from site constraints rather than a positive design led approach.