# EIA Quality Mark

## Case Study

### Dorenell Wind Farm 132kV Grid Connection

### Key Issues –

Key to this project was the completion of a thorough route optioneering study, which took place over an 18-month period, to identify the most preferable route for the grid connection. ASH co-ordinated the environmental aspects of this study, working in close conjunction with the project engineers. The outcome of the appraisal meant the final route avoided sensitive areas, helping to constitute this as a non-EIA development by the Scottish Ministers and statutory consultees.

Examples of key constraints that were taken into consideration in the study included:

- **Landscape and Visual** – To connect the two substations, it was inevitable that the grid connection would pass through an Area of Great Landscape Value (AGLV), a local landscape designation. ASH helped to design the connection so that it would avoid the more sensitive, open moorland sections of the AGLV and the more sensitive parts of Glenfiddich. Instead, the overhead line was routed through agricultural fields and forestry areas where man-made land use and features are already a predominate characteristic of the landscape.

- **Cultural Heritage** – The route of the connection took into consideration two Special Protection Areas, designated for breeding Common gull, in order to avoid intersecting potential flight paths.

- **Ornithology** – The routeing of the connection took into consideration two Special Protection Areas, designated for breeding Common gull, in order to avoid intersecting potential flight paths.

### Purpose of the project

ASH was commissioned by Scottish Hydro Electric Transmission plc (SHE Transmission) to co-ordinate the environmental assessment process (including undertaking a landscape and visual assessment) and to produce an Environmental Appraisal, in support of a Section 37 application to the Scottish Government for an overhead line grid connection for Dorenell Wind Farm.

### Description of the project

The project involved forming a new grid connection for the consented Dorenell Wind Farm, a 220-megawatt (MW) development.

The connection would be between the wind farm onsite Substation and the existing Blackhillock Substation, located approximately 2 km south of Keith in Morayshire.

The overhead line connection consisted of 23 km of one double circuit 132kV composite ‘H’ pole overhead line.

An application for the Development was submitted to the Scottish Ministers in August 2016 and a decision is expected by spring 2017.
Lessons learnt
Initially the connection was going to be via twin line of traditional wood “H” poles, however, an alternative and innovative composite pole design was considered by SHE Transmission due to the advantages that the design offered for this particular project, including:

- The strength of the composite poles meant a larger sized conductor could support one line (rather than two wood pole lines).
- Although taller than wood poles (by approx. 8 m), the composite pole would allow greater clearance underneath the conductors; ideal in this particular locality, where agricultural machinery is commonly used.
- Greater spacing between poles would result in fewer poles being required along the length of the connection (by approximately 75%) and less impact upon the use and operation of the land.
- Shorter construction programme and easier and cheaper to maintain.

ASH ensured that the environmental appraisal accurately captured this innovative design of overhead line in the environmental assessments undertaken.

Lessons learnt cont. -
A number of lessons were learnt during the design development and EIA stages of the project, these included:

- Importance of good routeing and design should not be underestimated. Thorough consideration of the design and route of the grid connection were key in achieving consultee and public buy-in, avoiding sensitive areas and thereby constituting the development as non-EIA.

- Maintaining engagement with the local community was key and was carried out early on and throughout the design process, as well as prior to submission of the application. This helped to gain the thoughts and feedback from the local community on the options being considered, which were fed into the iterative design.

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