



SCOTTISH EXECUTIVE  
Development Department

## Planning Advice Note

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# RENEWABLE ENERGY TECHNOLOGIES

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## Power Lines

69. Power lines connecting the individual turbines to the on-site substation will be underground. To avoid visual confusion, routing and design of power lines, connecting the wind farm substation to the electricity distribution system, will require sensitive treatment (see paragraph 28).

## Siting in the Landscape

70. In order to minimise wind speed variations, commercial wind farms need to be located in areas of relatively smooth and rounded relief. They also require ready access to the electricity transmission and distribution system unless they are intended solely for private use. The current generation of turbines is capable of operating at lower wind speeds than previously which has the effect of increasing the types of areas (and landscapes) that may attract developer interest. Public concern over the visual impact of past (and many current proposals) has been a recurring feature. Experience, following construction, suggests that much of the fear is unnecessary. It is, nevertheless, an issue that continues to need to be addressed.

## Case study 5 : Public Attitudes Towards Wind Farms in Scotland

This research examined the attitudes of local populations towards the four operational wind farms in Scotland (Hagshaw Hill, South Lanarkshire; Windy Standard, Dumfries and Galloway; Novar, Highland; and Beinn Glas, Argyll and Bute). The major aim of the research was to examine how residents feel about the existence and proximity of their local wind farm. An important objective was to identify whether, and to what extent, residents' views of wind farms are based on actual experience or perception formed through the media, word of mouth or other sources.

Respondents were generally positive about wind farms. Those who lived nearest a wind farm were more likely to provide positive responses when asked about the wind farm than those in the other areas. For example, while 67% of respondents overall said that there was something they liked about the wind farm, this proportion increased to 73% of those living in the area closest to the wind farm.

The proportion of respondents who had anticipated problems prior to the development (40%) was far higher than the proportion who actually experienced problems after the development (9%). Actual noise caused by the turbines or the visual impact of the wind farm did not feature as issues for the majority of respondents.

Public Attitudes Towards Wind Farms in Scotland.  
Scottish Executive Central Research Unit. 2000

## Cumulative Effects

*"A Guide to Assessing the Cumulative Effects of Wind Energy Development"*  
W/14/00538/REP  
ETSU 2000

89. The cumulative impact of a number of neighbouring developments may also be a relevant consideration. The nature and character of the location, and the landscape in which a development is located, will in part determine the acceptability or otherwise of siting proposals in proximity to each other.

90. A number of factors have influenced the current geographic distribution of wind farm proposals in Scotland, for example :

- the distribution of the viable wind resource;
- technical and economic constraints to the viability of exploiting different wind speeds;
- electricity grid access constraints;
- protected areas;
- planning policy.

These have tended to focus developments in a relatively limited number of areas. However there have been few instances where cumulative effect has had to be addressed but with more proposals coming forward this could change.

91. The cumulative effects of wind farm development can arise as the combined consequences of :

- an existing wind energy development and a proposed extension to that development;
- proposals for more than one wind energy development within an area;
- proposal(s) for new wind energy development(s) in an area with one or more existing development(s);
- any combination of the above.

*"Beinn An Tuirc : Assessment of Effects on the Landscape Resource and on Visual Amenity"*.  
Special report by Turnbull Jeffrey Partnership for ScottishPower  
June 1998

In assessing cumulative effects, it is unreasonable to expect this to extend beyond schemes in the vicinity that have been built, those which have permissions and those that are currently the subject of undetermined applications.

## Decommissioning, re-equipping and replacement

92. Wind turbines can be decommissioned and sites cleared and restored easily and rapidly. This should be covered in the conditions and/or legal agreement accompanying the consent and will be triggered by the expiry of the consent or in the event of the project ceasing to operate for a specified period. Planning authorities should satisfy themselves that funding for decommissioning will be available when required.