

Ayrshire and Clyde Valley windfarm landscape capacity study

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Contractor: Land Use Consultants

Background

There is increasing pressure for wind energy development in much of Scotland. SNH, in association with various partners, is exploring ways in which these developments can be guided to the most appropriate landscapes.

Four areas of Scotland have been identified for study as part of a pilot project, of which this study of Ayrshire and the Clyde Valley is one. All the studies involved the development and application of a methodology for assessing the capacity of the landscape to accommodate wind energy based on landscape character. Each study developed an experimental and individual approach.

It is important to note that the projects can only provide a very broad context. They cannot be used as an indication of the suitability of a particular location for wind energy development. Individual applications will still require detailed landscape and visual impact assessments. The studies do not represent the policies of SNH or others. The windfarm capacity research work is contributing to the understanding of strategic issues in relation to wind energy development and the landscape.

While the results of this study are useful in comparing different parts of the study area, they should not be used to consider single windfarms in isolation. More local landscape capacity studies together with landscape and visual assessment are required.

The study considers only the landscape and visual factors associated with windfarm development. It does not take account of other factors such as recreation, habitats and species, cultural heritage, grid connections or land ownership. It is designed as an input to policy making.

The study involved the definition of a core study area and a 30km buffer zone where the effects of windfarms located in the core zone were assessed. The study considered the sensitivity of the landscape to a typical windfarm development, and examined the zones of visual influence (ZVIs) for 115 sample locations in the core study area. Scenarios work to explore the cumulative implications of meeting the 2020 renewable targets through on-shore wind energy development were explored.

A perception study was undertaken in parallel with the assessment, the aim being to gauge wider views about the Scottish landscape and the potential effect of windfarms upon it.

Main findings

There are significant variations in the sensitivity of the landscape to windfarm development across the study area.

Some areas have greater 'capacity' for windfarm development taking into account intervisibility, landscape sensitivity and the local resident population. These areas are the plateau moorlands between Ayrshire and South Lanarkshire, the Clyde Valley around Abingdon, the Renfrewshire hills, the Southern uplands in South Ayrshire, the Plateau moorland above Airdrie. More detailed capacity studies, based on the assessment of local landscape character areas should inform locational policies within each of these areas.

The study area is unable to accommodate the level of modelled development without incurring significant landscape and visual impacts.

Irrespective of the level of development ultimately achieved within the study area, a planned approach, based on the concentration of development into a smaller number of larger windfarms will help reduce the overall level of landscape and visual impact.

For further information on this project contact:

**Anne Lumb, Scottish Natural Heritage, Caspian House, Mariner Court, Clydebank Business Park
Clydebank G81 2NR. Tel: 0141-951 4488**

For further information on the SNH Research & Technical Support Programme contact:

The Advisory Services Co-ordination Group, Scottish Natural Heritage, 2 Anderson Place, Edinburgh EH6 5NP.
Tel: 0131-446 2400 or ascg@snh.gov.uk
