

WIND FARMS AND PEATLAND

GOOD PRACTICE PRINCIPLES

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SUMMARY

Peatlands provide a range of services of environmental, economic and social importance including biodiversity, water management and carbon storage. Good practice in locating, designing and managing wind farms can lead to them being successfully accommodated within some areas of peatland, with minimal adverse environmental effect. Furthermore, in some situations, good practice can deliver long-term peatland benefits including restoration of previously damaged habitat.

These good practice principles have been agreed between representatives of the renewables industry and conservation bodies in Scotland, in order that the potential negative effects on peatlands can be minimised and the real benefits of wind energy generation realised. The Principles are designed to support further dialogue and are not intended to provide the detailed direction that is more appropriate in formal planning and other statutory guidance on wind farm development.



BACKGROUND

Peatland is a general term covering a range of habitats on peat soils that occupy over a third of Scotland's land area [1]. The deepest peat occurs under blanket and raised bogs; these are habitats of international importance for nature conservation and have been identified as priorities under the Scottish and UK Biodiversity Action Plans. Around 15% of the deep peat area has been designated under national or international wildlife conservation legislation [2]. Much of the peat bog habitat has been damaged by past activity such as fire, grazing, drainage and conifer planting. There are however considerable areas with potential for habitat restoration to recover favourable conservation status.

Peatlands are important as carbon stores with estimates of at least 3000 million tonnes of carbon in Scottish peat soils [3]. They have additional importance for soil biodiversity, as preserves of archaeological and other historic remains and provide a range of water management and quality functions. In the context of EU renewable energy targets, the Scottish Government is committed to supplying 50% of Scotland's electricity consumption from renewable sources by 2020. Scotland has 25% of Europe's wind resource and onshore wind will provide a key means of achieving this target. Other benefits from the wind industry include:

- **Significant reductions in carbon emissions**
- **A secure, diverse sustainable and competitive supply of electricity**
- **Developing an industry competitive in home and export markets**
- **Contribution to rural economic and social development**

The Climate Change (Scotland) Act 2009, sets legal targets for carbon reduction and requires these to be delivered in a sustainable manner. In order to be sustainable, the wind industry should develop in ways that minimise environmental harm. Peatlands cover a significant proportion of Scotland and can be in areas that are the best for harnessing wind energy. Potential environmental impacts from wind farms on peatlands will depend on the location, design and management of the development. The lowest impacts will be in situations where the development avoids peatland areas of significant environmental importance and does not disrupt important ecological functions.

In some peatlands, careful design and management of wind farms including habitat restoration measures have brought added value for wildlife and ensured optimal carbon benefits. In order to gain better understanding and common agreement on the impacts of development on peatlands and their functional benefits there is a need for national coordination of research with more applied science and exchange of information through an inclusive and transparent process. The following principles have been agreed to help deliver wind farms in Scotland in a sustainable way that minimises the impact on our important peatland resource.

[1] Milne R. and Brown TA (1997) *Carbon in the Vegetation and Soils of Great Britain. Journal of Environmental Management*. 49, 413-433

[2] UK Biodiversity Group Tranche 2 Action Plans - Volume VI: Terrestrial and freshwater species and habitats. Blanket Bog Action Plan, JNCC Peterborough

[3] ECOSSE (2007) Estimating Carbon in Organic soils Sequestration and emission. Edinburgh; Scottish Executive.

4 PRACTICE PRINCIPLES

PRINCIPLE 1

Peatlands are recognised as environmentally valuable, and important stores of carbon. Areas of deep peat and those predominantly consisting of active bog habitat or with statutory environmental designations are recognised as higher constraints. When siting wind farms, every reasonable effort should be made to avoid significant adverse environmental effects in these areas.

PRINCIPLE 2

Where development is proposed for peatland, good practice should be followed and steps taken to deliver positive greenhouse gas and other environmental benefits, consistent with the natural ecosystem functions of the habitat. This should be achieved through agreements to ensure properly planned and managed habitat restoration with steps taken to ensure maximum effectiveness, developed through full and open stakeholder engagement.

PRINCIPLE 3

The renewables industry will assist in improving the knowledge base on the impacts of development on peatland and the effectiveness of peatland rehabilitation through putting in place scientific monitoring and sharing of data with other stakeholders, where appropriate.

PRINCIPLE 4

The renewables industry will engage with stakeholders to provide support for applied research into key areas of peatland science relevant to understanding the impacts of development on the various peatland qualities including biodiversity, carbon and hydrology.



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