

Restoration of peatlands in Ireland.

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In the Republic of Ireland peatlands originally accounted for up to 17% of the land surface. However, this area has been significantly reduced by drainage for agriculture, forestry, turf-cutting and industrial use. Current estimates indicate that the cover is now 13%, with a high representation of degraded peatlands. In the 1980s there was a growing awareness of the need to preserve pristine sites which was further re-enforced by the EU Habitats Directive; particularly given that the raised and blanket bogs of Ireland present some of the best remaining examples of their type in Europe.

Despite the international significance of the Irish peatlands, even the most pristine examples are subject to the effects of turf-cutting and drying out. In a bid to reverse this trend, a programme of restoration was established in the 1980s by a joint Irish and Dutch working group; with technical support provided by Bord na Móna. The project focused on the restoration of two raised bog sites: Clara and Raheenmore Bogs in County Offaly, both of which experienced long-term effects of drainage, burning and turf-cutting. The primary aim of the project was restoration of these sites to *active* raised bogs. Bord na Móna continues to work with conservation groups to carry out necessary hydrological manipulations and to develop best practice techniques for bog restoration. *Coillte* (the state forest company) has also undertaken extensive bog restoration projects under the EU *Life* programme with the aim of restoring blanket and raised bog areas that were originally planted for commercial forestry.

Bord na Móna is responsible for 8% of the Irish peatland resource: the greater part of which is actively managed for milled peat production for three recently built power stations. Supply of milled peat will continue until 2020, and possibly 2035 depending on national energy policy. Bogs initially utilised for horticultural peat are switched to milled peat for energy production once the moss peat layers are removed. There are few areas that have been removed completely from peat production in the midlands and cutaway bog emerges on a piecemeal basis. The cutaway areas are generally characterised by shallow peat (0.5m to 1m), and influenced by minerotrophic drainage waters.

A number of research projects were initiated to consider potential commercial and non-commercial after-use options for the midlands cutaway bog areas and these are demonstrated on a large-scale at the *Lough Boora Parklands* in Co. Offaly. Currently the option of regeneration of semi-natural habitats is considered the most likely after-use for up to 50% of the cutaway bogs. Natural colonisation of the cutaways results in a mosaic of semi-natural habitats including (a) *wetland habitats*: poor fen, rich fen, reed beds, open water, and (b) *dryland habitats*: acid grassland, heathland and birch woodland. These areas are rich in biodiversity and will contribute to the national biodiversity resource and wildlife conservation strategy.

The scope for restoration of peat-forming ecosystems on Bord na Móna bogs has however been limited to date. One area did emerge in the west of Ireland where milled peat was produced from an extensive area of Atlantic blanket bog (6,500Ha). This provided the first opportunity to implement a peatland rehabilitation programme at the industrial level in Ireland. In the future, there may be greater scope for restoration on the midlands Bord na Móna production areas, particularly where deep, acidic peat deposits remain.

About the author: Dr. Catherine Farrell has been working with Bord na Móna since 2001. Her Ph.D. research and early work was primarily on the potential for restoration of peat-forming plant communities at a large industrial cutaway Atlantic blanket bog site. The work involved establishing a

scientific basis for practical rehabilitation methods. She is now working on land-use categorisation and after-uses of the broader Bord na Móna peatland resource.