

The BOGFOR Project

Since the late 1940s, Bord na Móna has been responsible for harvesting vast quantities of peat from our bogs for fuel. The peat has fuelled power stations and heated homes all over Ireland. While large peat resources still exist in these bogs, one by one they are becoming exhausted for fuel production. They remain a valuable resource, however, whether as wetlands, wild woodlands, or for grassland or production forestry.

The BOGFOR research project began in 1998 with the objective of investigating the forestry potential of the cutaway bogs and developing techniques for establishing forests on them. BOGFOR is a cooperative project, involving Coillte, Bord na Móna and UCD. It is led by Professor Ted Farrell, of UCD. The project has been funded by the Forest Service, COFORD, Coillte and Bord na Móna. One of the great strengths of the project has been the merging of managerial and research expertise to address the particular problems of cutaway peatland forestry.

Ireland has long experience of peatland afforestation, most of it on blanket peatland in the West and on our mountain ranges. Industrial cutaway peatlands, however, are very different in character from these peatlands and present a series of unique, challenging problems. The peat remaining after harvesting has been buried for several thousand years under the enormous weight of the overlying bog. It has been compacted and its physical properties are radically altered by this overlay.

At first glance, cutaway bog appears to offer a uniform and relatively easy medium for afforestation. For some years after harvesting has ceased it remains vegetation free, the surface is quite level, there are no steep slopes and a drainage system, installed for peat harvesting, is present. This benign appearance, however, is quite misleading. Far from being uniform, the peat properties are highly variable and the depth of residual peat can range from zero to more than a metre. Vegetation establishes quickly, especially following the application of fertilizer necessary for tree growth and it often competes aggressively with the trees in the early years.



Cutaway peatlands in production showing drains every 15 m and, below, 'peat exhausted' bays beside peat field still in production (Noggus).



Five-year-old Norway spruce demonstration area (Blackwater).

Despite the drainage system and the relatively level terrain, depressions in the surface result in wet areas and tree failure. In addition, aeration is limited in these peats, as a result of millennia of compaction. Spring frost, which damages emerging buds, is an additional, serious hazard, in this low-lying terrain.

These are the problems addressed in the BOGFOR project. Over 200 ha of experimental and demonstration plantations have been established. A large number of tree species have been tested under the unique conditions of the cutaway peatlands. Coniferous species are the first choice for production forestry, but native



broadleaved trees also have their place. Trials were set up to determine the fertilizer requirements of the trees and to investigate the environmental implications of afforestation. Equipment for vegetation control and soil cultivation was modified and tested. For most of the life of the

project, this work was overseen and managed by the project manager, Dr Florence Renou, of UCD.

It is estimated that 16,000 to 20,000 ha of the cutaway bogs may be suitable for afforestation. The BOGFOR project has made great progress in tackling the difficult challenges these sites present. We have the knowledge now to begin the process of commercial development of this great resource. However, a headlong rush into large-scale afforestation, at this stage would be unwise. Forestry research is, by its nature, long term. We must proceed



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Left: Five-year-old pedunculate oak under birch (Tumduff).

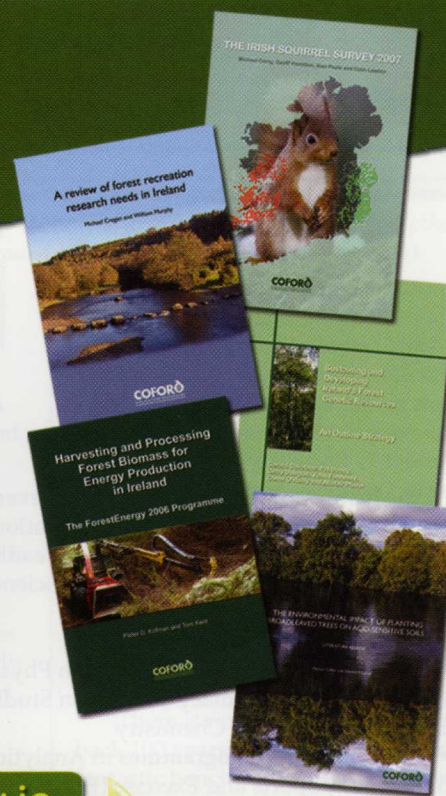
Right: Ten-year-old common alder (Tumduff).

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