

REDAREAS

Management options for forests on western peatlands

PROJECT TEAM

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OBJECTIVES

This project aims to develop and demonstrate alternative management options on western peatland forests. A vision for peatland forests is that their primary objective will no longer be purely roundwood production but they will move towards delivering multiple objectives, with a strong emphasis on environmental services, including water protection, landscape and biodiversity. In realising this vision, it is necessary to explore different options for cost-effective regeneration, species choice and forest design.

PROGRESS

- *Assessment of factors affecting native tree natural regeneration:* Detailed analysis has been conducted and models have been developed to predict the extent of natural regeneration, based on site factors, for birch, holly, rowan and willow.
- *Retrospective field survey of natural regeneration potential:* Assessment of natural regeneration on recently felled areas has shown that it occurs sporadically and is difficult to manage. Fourteen sites were assessed, with regeneration occurring at only four.



A view of woodland at Loughaunierin, Co Galway, taken from the southwest - the main species in the canopy is birch.

- *Biomass trial assessments:* Biomass trials planted in 1979-1983 show the consequence of not re-spacing where there is prolific natural regeneration of south coastal lodgepole pine. With a current top height of 15 m and an average DBH of 11 cm, sawlog dimensions are unlikely to be attained, with energy wood and stakewood the expected end uses.
- *Review of existing broadleaf scrub cover:* While willow is the most commonly occurring species, there may be potential to establish birch, holly and rowan on shallower peats with a depth of less than a metre or so, providing grazing can be controlled.
- A summary protocol for alternative regeneration options is being developed, based on current understanding; further development is expected following research currently underway.
- A review of blanket bog restoration showed that success depends on having deep peat on relatively flat ground, preferably with young or poor crops, where the tree canopy has not closed and where bog vegetation exists. Where the canopy has closed, restoration will occur more slowly and will require tree removal, windrowing of brash and drain blocking will be required.
- A report on the effect of riparian enhancement during pre-clearfelling as a water quality protection measure is in preparation.
- *Riparian vegetation recovery following clearfelling:* successful vegetation recovery in riparian zones occurs in less than three years on mineral rich areas and over longer periods in mineral poor areas.
- Establishment and monitoring of broadleaf trial plots is ongoing. The trees are not yet at the free growing stage and further assessments are required. Birch, rowan and willow have shown the best survival rates so far.
- *Mammals and avifauna survey:* The diversity of birds and mammals was higher in more structurally diverse and habitat rich forest. A total of 59 bird species and eight mammal species were recorded during the surveys.

ACTIVITIES PLANNED

Reports will be finalised on the effectiveness of pre-clearfelling for riparian enhancement and water protection, and on alternative regeneration options.



A view of an unplanted and ungrazed riparian zone dominated by soft rush approximately 10 years after clearfelling.

Prolific natural regeneration of south coastal lodgepole pine at Lapallagh forest, Co Mayo.

