

Mechanical clearance of maritime pine *Pinus pinaster* using a shear-head timber processor at Barnsfield, Dorset, England

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SUMMARY

At a site in southern England in September 2004, about 4 ha of mature, dense, non-native, maritime pine *Pinus pinaster* was cleared using a shear-head timber processor. One year later in August 2005, the cleared area was predominantly covered in purple moor-grass *Molinia caerulea* (approx. 80% cover). The remaining 20% was either bare ground (approx. 15%) or mature heather *Calluna vulgaris* and gorse *Ulex* plants (less than 5% cover) present prior to clearance, but no heather seedlings were found. There was no evidence of any pine regeneration.

BACKGROUND

Encroachment of trees and scrub onto heathland areas poses a major problem for heathland managers. Without removal, tree species such as birch *Betula spp.* and pine *Pinus spp.* can dominate, shading out the dwarf ericaceous shrub community. This can result in the loss of many species characteristic of open heathland. Removal of mature trees is often desirable but can be time consuming and controversial. In England, mature (non-native) maritime pines *Pinus pinaster* can pose particular problems as the tree grows very quickly. Mature trees shed large numbers of cones and a deep litter layer soon builds up.

The success of pine clearance by contractors working for the RSPB Heathland Project on privately owned land at Barnsfield Site of Special Scientific Interest (SSSI), in Dorset, southern England, are described here. The management work was carried out under the auspices of the RSPB Heathland Project as part of a wider programme of heathland management across the Dorset Heaths.

ACTION

The area cleared comprised approximately 4 ha of mature, very dense maritime pine within Hurn Common SSSI (National Grid ref: SU 123002), Barnsfield, Dorset, southern England. The pine was cleared in September 2004 using a shear-head timber processor. The processor



Photo 1. View of cleared area taken in August 2005 showing fresh growth of purple moor-grass *Molinia caerulea*, Hurn Common SSSI, Barnsfield.

consisted of an excavator mounted with a 12-inch (30 cm) shear action head. Cut material was converted into wood-chip for fuel. The chipper was a 370 horsepower, self-propelled grab-fed whole tree chipper capable of chipping up to 400 cubic metres of timber per day.

Prior to clearance the area supported little heathland vegetation due to the dense cover of maritime pine and the resultant deep shade, and the thick layer of accumulated pine litter.

CONSEQUENCES

It was estimated that 2,000 tonnes of fuel wood-chip were generated and removed from the site during the maritime pine clearance in 2004.

The area was revisited in August 2005, one year after the clearance. No heather *Calluna vulgaris* (a desirable component plant species

characteristic of lowland heath) seedlings were found. The cleared area was predominantly covered in a fresh growth of purple moor-grass *Molinia caerulea* amounting to approximately 80% cover (Photo 1), with the remaining 20% being either bare ground (approx. 15%) or mature heather and gorse *Ulex* plants (both less than 5% cover) which had been present prior to the clearance. There was no evidence of any pine regeneration.

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