

# Mechanical clearance of Scots pine *Pinus sylvestris* using a shear-head processor at Barnsfield, Dorset, England

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## SUMMARY

In August 2004, an area of just over 1 ha of dense, mature Scots pine *Pinus sylvestris* was cleared on former heathland using a shear-head timber processor. Prior to the clearance, the area supported little heathland vegetation and was predominantly bare ground with some bracken *Pteridium aquilinum* underneath the dense pine canopy. One year after the clearance, heather *Calluna vulgaris* seedlings had become established. Evidence suggests that control of bracken and tree seedlings may be required as part of long-term management in order to restore and maintain an open heath.

## BACKGROUND

Encroachment of trees and scrub onto heathland areas poses a major problem for heathland managers. Without removal, tree species such as birch *Betula* and pine *Pinus* can dominate, shading out the dwarf ericaceous shrub community and resulting in a loss of many of the species associated with that community. Removal of mature trees can be time consuming and controversial.

The clearance by contractors, working for the RSPB Heathland Project on privately owned land at Barnsfield is described here. The area cleared was just over 1 ha of mature, very dense Scots pine *Pinus sylvestris*, lying within Hurn Common Site of Special Scientific Interest (SSSI). The management work was carried out by the RSPB Heathland Project as part of a wider programme of heathland management across the nationally important Dorset Heaths.

## ACTION

**Pine clearance:** At Barnsfield (National Grid ref: SU 124002) in Dorset, southern England, just over 1 ha of dense, mature Scots pine was cleared in August 2004 using a shear-head timber processor. The processor comprises an excavator mounted with a 12" (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.

**Understorey before clearance:** Prior to clearance the area supported little heathland vegetation and was predominantly bare ground with some bracken *Pteridium aquilinum*, underneath the thick pine canopy.



**Photo 1.** View of cleared area showing plant regeneration (mostly bracken *Pteridium aquilinum*). The area was previously continuous Scots pine *Pinus sylvestris* cover, as in the background. Barnsfield, Hurn Common SSSI, August 2005.

## CONSEQUENCES

**Vegetation regeneration:** In August 2005, a year after the Scots pine clearance, the area was revisited. Heather *Calluna vulgaris* (a desirable and important component plant characteristic of heathland) seedlings had clearly become established since clearance. However bracken was rapidly becoming dominant. Photo 1 shows the vegetation regeneration in the cleared area.

The total percentage cover of vegetation within the area cleared was estimated as:

- 40% bracken *Pteridium aquilinum*
- 15% purple moor grass *Molinia caerulea*
- 5% mature heather *Calluna vulgaris*
- 10% heather *C. vulgaris* seedlings
- <1% silver birch *Betula pendula* seedlings
- 30% bare ground

It is hoped that heather will continue to regenerate. Control of bracken and tree seedlings may be required as part of long-term management in order to restore and maintain an open heath.