

# Ring-barking of pine *Pinus* trees to create standing deadwood on heathland at Barnsfield, Dorset, England

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## SUMMARY

A number of pine *Pinus* trees were ring-barked using either single or double cuts, two trees also had their crown removed. One to two years later, all the ring-barked trees were still standing. The only two which had died were the ones with their crown removed. The remaining trees were all alive but had some dead needles and needles showing signs of discolouration. There was no clear difference between trees cut using a single or a double cut.

## BACKGROUND

Dead wood is an important invertebrate habitat, and the saproxylic species associated with the decay of timber are very diverse and of exceptional value for conservation. Dead wood occurs in a wide variety of forms including standing dead wood (Kirby 1992), an uncommon habitat in the UK. One method for site managers to use to create standing deadwood is to ring bark trees.

The results of ring-barking by the RSPB Heathland Project during tree and scrub clearance at Barnsfield in Dorset, southern England, are described here.

## ACTION

**Locality:** As part of heathland restoration work by the RSPB Heathland Project at Barnsfield (National Grid ref: SU 120000), Dorset, a 0.75 ha area of pine was mostly

**Table 1.** Date of ring-barking of Scots and maritime pine trees and their condition in July 2005, Barnsfield, Dorset.

Tree number	Species	Date ring-barked	Type of cut	Condition of tree July 2005
1	Maritime pine	9/2004	Single cut	Still alive, about 10% of needles dead, particularly on the lower branches.
2	Maritime pine	9/2004	Single cut	Still alive, about 40% of needles dead, particularly on the lower branches.
3	Maritime pine	9/2004	Single cut	Still alive, about 30% of needles dead, particularly on the lower branches.
4	Scots pine	12/2003	Double cut	Less than 5% of needles brown, rest of needles distinctly paler green than uncut trees.
5	Scots pine	9/2004	Double cut and crown removed	No needles present and lower branches bare, some signs of invertebrate activity (holes) in lower trunk.
6	Scots pine	9/2004	Double cut and crown removed	No needles present and lower branches bare, some signs of invertebrate activity (holes) in lower trunk.
7	Maritime pine	11/2004	Double cut	c.5% needles brown right through canopy.
8	Scots pine	11/2004	Double cut	c. 15% of needles brown, through canopy.
9	Scots pine	11/2004	Double cut	c. 15% of needles brown, especially on lower branches.
10	Scots pine	11/2004	Double cut	c. 15% of needles brown, on lower branches only.
11	Scots pine	11/2004	Single cut	c. 15% of needles brown, on lower branches only.
12	Scots pine	11/2004	Single cut	c. 15% of needles brown, on lower branches only.

cleared, but with some standing Scots pine *Pinus sylvestris* and maritime pine *P.pinaster* trees left in place.

**Ring-barking:** A number of these pine trees were ring-barked using a variety of different techniques and at different times of year (between December 2003 to November 2004, Table 1). On some trees a single cut was made through the bark completely circling the trunk. On others (described here as double cuts) two parallel cuts were made and the bark between them was removed. On two trees with double cuts, the crown of the tree was also removed at about 7 m above ground level using a shear processor and removed from site.

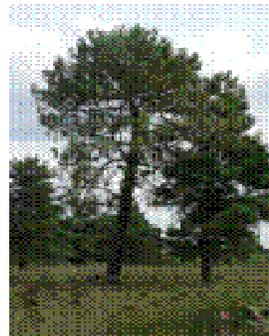
The ring-barked trees were relocated in July 2005 and the method of ring-barking and the condition of the tree were recorded. A number of the trees were photographed (Photos 1-7).



**Photo 4:** Scots pine, Tree 5 (double cut) crown removed.



**Photo 1:** Single cut used on Scots pine, tree 11.



**Photo 5:** Scots pine, tree 7 (double cut).



**Photo 2:** Double cut on maritime pine, tree 7.



**Photo 6:** Scots pine, tree 4 (double cut).



**Photo 3:** Detail of double cut used on Scots pine, tree 4.



**Photo 7:** Maritime pine, tree 1 (single cut).

## CONSEQUENCES

**Effect of ring-barking:** All the trees that had been ring-barked were still standing when surveyed in July 2005. The only two trees which had died were the ones with the crown removed. The remaining trees were all showing green needles, but also had some needles showing signs of discolouration (yellowish) and some dead needles.

There was no clear difference, after a year or two at least, between trees cut using a single or a double cut.

On going monitoring will determine how long the ring-barked pines take to die.

## REFERENCES

Kirby P. (1992) Habitat management for invertebrates: a practical handbook. Sandy, Bedfordshire, RSPB, UK.