

Information Note

August 2015

Fuel Loads in Banksia Woodlands

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Key Points

- Banksia can be moderately to highly flammable.
- Important to know the fuel load of Banksia Woodlands.
- Use the litter depth to calculate the Banksia leaf litter fuel load in Table 1.

Definitions

- **Leaf litter** refers to the accumulated layer of leaves, twigs and bark on the ground.
- **Leaf litter depth** refers to the average distance from the mineral earth to the top of the leaf litter.
- **Epicormic shoot** is a shoot growing from an epicormic bud, which lies underneath the bark on the trunk or limb of a tree.
- **Epicormic bud** refers to a bud that lies dormant until it is activated, such as when damage occurs.

Above: *Banksia attenuata* flower.

Right: Banksia woodland.

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If you have Banksia around your property, it is important to understand how much Banksia fuel is present as these fuels can be moderately to highly flammable.



Banksia are a plant genus from the Proteaceae family, commonly recognised for their knobbly fruiting cones and large flowering heads. Nationally there are 172 species, with South-Western Australia containing the greatest variety of species.

Banksias are found in a wide variety of landscapes including: forests, woodlands, shrublands, and arid areas, and range in form from prostrate ground covers to shrubs and trees.

In the presence of bushfires, approximately half of the affected Banksia population dies. However, if left undisturbed, the Banksia's fire resistant cones disperse seeds and quickly regenerate. The remaining Banksia survives as a result of their thick bark, which provides heat protection, and the ability to resprout from epicormic shoots.



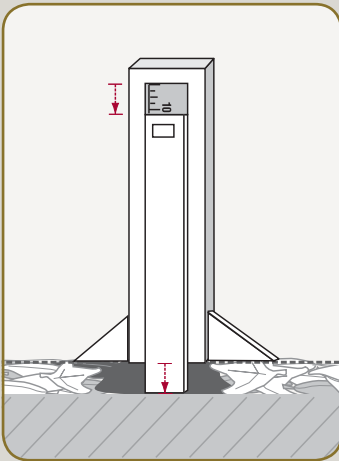
Determining how much Banksia fuel is present

To determine the weight of Banksia leaf litter, you must first ascertain the litter depth. Leaf litter depth can vary depending on the type and age of the overstorey vegetation, including the period between burning times. Older Banksia will generally have a greater amount of leaf litter and therefore a greater fuel load.

Using a leaf litter depth gauge

Leaf litter depth of Banksia litter can be determined using the following steps:

1. Using your finger or probe, carefully clear away the leaf litter down to the mineral earth to create a hole of around 4 cm in length.
2. Ensure the litter on one side remains completely undisturbed.
3. Remove any large obstructions such as twigs, rocks or nuts greater than 6 mm diameter from where the litter depth gauge will rest.
4. Push the base of the gauge downwards onto the litter, with as much force as it would take to hold a tennis ball under water.
5. Press the slide of the litter depth gauge firmly against the soil without pushing into the soil surface. Firmly hold the slide against the case and take note of the measurement revealed on the ruler.



Above: Diagram of leaf litter depth gauge.

Calculate the litter weight (fuel load)

To calculate the litter weight using Table 1, choose the closest measured litter depth and read off the total litter weight.

Table 1: Relationship between Litter Depth and Total Litter Weight in Banksia Woodlands.

Litter Depth (mm)	Litter weight (tonnes/ha)
5	3
10	6
15	8
20	11
25	14
30	16
35	19
40	21

Table includes leaves and twigs up to 6 mm diameter.

 For more information contact the Environmental Protection Branch on 9395 9300, email: environment@dfes.wa.gov.au or visit www.dfes.wa.gov.au