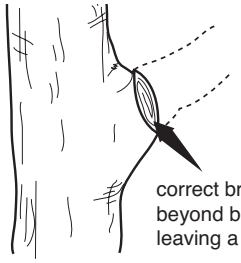
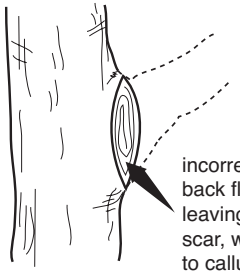
Fig 4.



correct branch cut just beyond bark ridges, leaving a small scar



incorrect branch cut right back flush with the trunk, leaving a much larger scar, which will take longer to callus over

Reshooting

Complete defoliation of the crown will not necessarily cause the death of the tree. Most eucalypts, except the ash group, swamp mallee and a few other species, will reshoot from dormant buds located beneath the bark of the trunk and branches. Many eucalypts have swellings called lignotubers at the base of their stem or trunk or sometimes below ground that often reshoot after fire.

Deciduous trees, including ash, elms, maples and oaks, may reshoot from dormant buds if the bud tissue is undamaged. Most eucalypts, acacias, she-oaks, poplars,willows, oaks and chestnuts may, if felled after a fire, reshoot (coppice) from the stump. Poplars, willows and some wattles, alders and she-oaks may reshoot from the roots.

Regrowth From Seed

The heat or smoke from a fire may release seeds stored in the hard woody capsules of most banksias, hakeas and melaleucas and some callistemons and eucalypts or stimulate the germination of seed stored in the soil. Most acacias are killed by fires of low to moderate intensity. However, the heat of the fire breaks down the hard protective seed coat of seeds buried beneath the trees, enabling the seed to germinate after rain.

Maintenance of Fire-damaged Trees

After a fire, unless trees are unsafe, or known to be incapable of recovery or regeneration from seed or shoots, they should be retained for 9-12 months. If recovery is likely, it will occur during this period. Dead trees and shrubs may still store viable seed and should not be removed until the autumn following the fire, by which time the seed will have been shed.

Trees showing signs of recovery can be nurtured by mulching and deep, periodic watering.

If you think that a tree has become unsafe after being damaged by a fire, contact your local council or a qualified arborist, to find out if the tree needs to be removed.

NSW RFS INFORMATION LINE
1800 679 737 (1800 NSWRFS)

Fire safety, school projects & general information.
www.rfs.nsw.gov.au

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NSW RURAL FIRE SERVICE

2

bush FIREWISE

TREES & FIRE RESISTANCE. REGENERATION & CARE OF FIRE-DAMAGED TREES

Yard & Property Layout

When designing your garden it is important to consider the type of plant species and their flammability and well as their placement and arrangement.

A well-planned garden can create an Asset Protection Zone, (APZ), for you and your family The NSW Rural Fire Service has produced a booklet detailing how this can be achieved, that is free and available to all householders.

Remember: given the right conditions, all plants will burn.

Fire-resistant plants, that are hard to burn, have the following features:

- high moisture content
- high levels of salt
- low volatile oil content of leaves
- smooth barks without "ribbons" hanging from branches or trunks
- dense crown & elevated branches.

Trees with loose, fibrous or stringy bark should be avoided. These trees can easily ignite and encourage the ground fire to spread up to, and then through, the crown of the trees. Eucalypts often regenerate after fire damage where conifers and pines will be killed.

When choosing fire-resistant plants, be sure not to introduce noxious or environmental weed species into your garden that can cause greater long-term environmental damage.

For further information on appropriate plant species for your locality, contact your local council, plant nurseries or plant societies.

Factors Affecting Where to Plant Shrubs and Trees

The three key factors that influence a fire's behaviour are fuel, weather and topography.

Four of the main weather determiners are: wind speed and direction, temperature and humidity.

Wind Breaks

Rows of trees can provide a wind break that trap embers and flying debris that could otherwise reach the house.

You need to be aware of the direction the "normal winds" associated with bush fires come from and position the wind break accordingly. See Fig. 1.

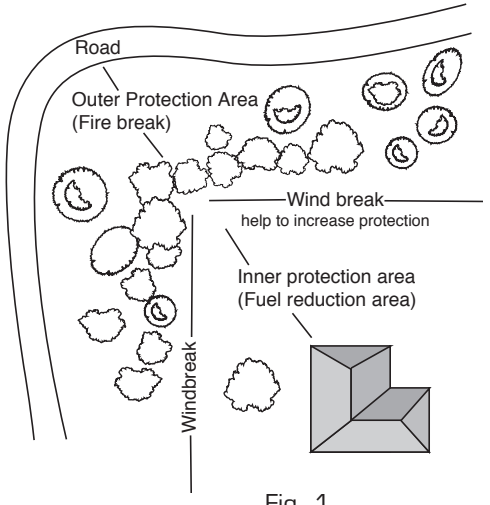
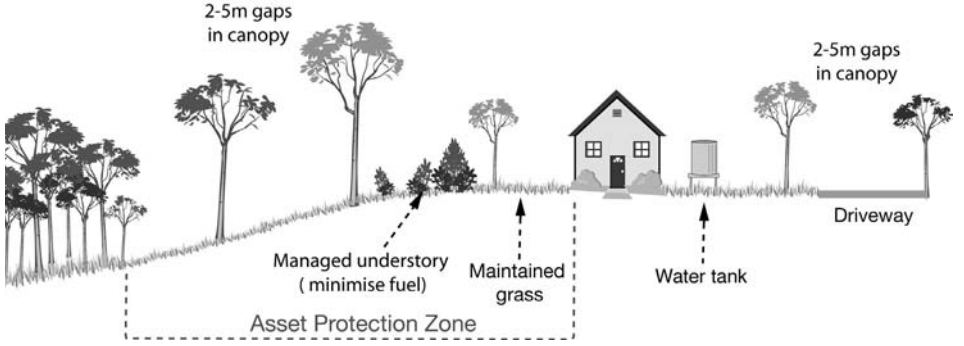


Fig. 1

When selecting trees and shrubs, seek advice as to their maximum height. Their height may vary depending on location of planting and local conditions. As a general rule, plant trees at the same distance away from any asset needing protection, as its maximum height. See Fig 2

Fig. 2



When creating a wind break, remember that the object is to slow the wind and to catch embers rather than trying to block the wind. In trying to block the wind, turbulence is created on both sides of the wind break making fire behaviour erratic.

Damage Caused by Fire

Radiant heat can scorch foliage and damage the conductive tissues beneath the bark causing subsequent defoliation and death of limbs above the site of injury. Where such injury extends around the circumference of the trunk the effect is similar to ring barking. Thick bark, found for example in the stringy bark group of eucalypts, effectively insulates against radiant heat, whereas thin bark provides little protection for the sapwood and dormant buds.

Where fire enters through wounds and branch cavities of a tree it may ignite the heartwood that can burn inside the trunk and branches and down into the roots at the base of the tree see Fig 3.

Trunks and limbs that do not burn through will be weakened and could endanger life and property thereafter. If fire affected limbs need to be pruned see Fig 4.

Recovery

The recovery of fire-damaged trees depends on the severity of damage, the seasonal growing conditions in the months after the fire and the age, vigour and regenerative capacity of the tree. Recovery may be in the form of reshooting or by regrowth from seed or both.