# **Living Near the Bush Fire**

Bushfires often occur in the Blue Mountains. Most local plants can recover provided that the average interval between fires and the fire intensities match the needs of the plants which have evolved over thousands of years. Most animals also have developed ways of sheltering or avoiding fires although it is true that a large number of individual animals perish or are injured in very large bushfires.

Humans, however, can influence the effect of fire on bushland by either burning too often or by cutting out fire from places that are used to it. Both actions will change the make-up of the plant communities in the bush, may make some plants locally extinct and, as a result, may impact on the well-being of other living things.

People living near bushland have a right to protect their properties but often the very best ways of protecting properties are also the best ways of saving the surrounding bush.



Everyone has seen television pictures showing the results of fires in urban areas near bushland. And we have all wondered at how some homes escape damage while those on either side are destroyed. While there are different factors involved in the survival of some houses (including good luck!), there are many actions that can be taken to improve fire resistance. Some can only be done prior to or during construction but other actions will be helpful for existing buildings.

It is important to **Be Prepared**! If you live near bushland, a fire threat is likely sooner or later.

## **Construction of New Buildings**

Prior to designing a new home, it's worth discussing fire-safe design and construction techniques with the architect or builder. Blue Mountains City Council can also advise on building in bushfire-prone areas.

Flat sites are safer than sloping sites and the steeper the slope the greater the danger.

**V** Buildings at the foot of slopes are safer than those at the top.

Simple house designs are preferable - minimize hard to reach areas where debris (leaves, twigs) can accumulate.

Concrete slab-on-ground construction is preferable to piers (where sparks can ignite material under the house).

Consider ground level rubble drains instead of gutters (which collect debris).

To minimise fire risk, refer to Blue Mountains City Council for policy and relevant Development Control Plans. Do **not** be guided by the generalisations in this Web.

## **Existing Buildings**

A range of options are available: some simple, some more difficult:

Keep gutters free of leaves.

Fix metal spark-proof screens to external vents and to fireplace openings indoors.

Ensure that that no gaps exist in external eaves where burning embers might enter.

Consider the installation of a roof sprinkler system, preferably using a water source separate from the reticulated supply (e.g. a diesel-powered pump drawing from a rainwater tank or swimming pool).

**V** Fully closed shutters can prevent window breakage from radiant heat.

#### **Fuel Removal/Reduction**

One of the most effective means of reducing fire risk is maintaining a zone around the house where accumulated fuel is eliminated or, at least minimized:

Keep grass cut low and remove ground litter.

Eliminate plants growing next to walls or which overhang roofs.

V Store flammable material away from the house.

On larger properties, maintain a fuel-free zone of 20-40 metres around the house and an additional fuel reduced zone of 10-60 metres. The dimensions of these zones depend on site slope and aspect; contact the Emergency Service Centre or the NSW Rural Fire Service for advice.

#### **Fire Restrictions**

#### **Danger Season**

In NSW there is a prescribed Bush Fire Danger Season which extends from

October 1 to March 31 but which may be extended if necessary. During this danger period:

- Barbecues and camp fires must be in a constructed fireplace at least 4.5 metres from any log or stump.
- A 1.5 m diameter area must be cleaned of combustible material around the fireplace.
- Burning off can only be done with a Council permit (Total Fire Ban overrules a permit)
- Household rubbish can only be burned in a incinerator between 7pm and 7am in accordance with Council or EPA regulations.

## Fire Bans

- **Total Ban** No wood, charcoal or gas barbecues allowed. Electric barbecues are allowed on private property under the control of an adult. The ground must be cleared for 3 metres around the barbecue and a reliable water supply must be available. No cigarette smoking or other naked flame sources are permitted.
- **Park Ban** This may be imposed within specific National Parks at times other than when Total Fire Bans are in force (Total Bans still apply in National Parks).
- **Backyard Burning** This is prohibited in the Blue Mountains Council area other than for legitimate hazard reduction burning for which a permit had been obtained.

## **Reducing the Hazard**

- Property owners are responsible for keeping fuel levels on their properties below dangerous levels. Section 66 of the Rural Fires Act allows Fire Control officers to inspect properties and require that hazard reduction be carried out. If necessary Council may carry out the necessary work and seek to recover costs from the owner.
- Fire Control authorities are obliged to notify nearby property owners if hazard reduction burning is to be carried out.

## **Hazard Reduction Burning**

Hazard reduction is the use of low intensity fire, under controlled conditions, to reduce the amount of ground-level fuel in forests, woodlands or grasslands. It may

also be used to protect vulnerable native animal colonies and to stimulate the growth of certain plant species. Hazard reduction is carried out during the non-Bushfire Danger Period by the National Parks and Wildlife Service, the NSW Rural Fire Service, and other authorised Government bodies. In rural areas landholders may also carry out hazard reduction burning with the approval of Blue Mountains City Council.

The use of hazard reduction burning is often controversial as it may produce a classic conflict between the needs of humans and the protection of the environment. For example:

- Frequent, low intensity burns reduce the danger to life and property during the bushfire danger period, but....
- Frequent, low intensity burns can result in a change in the composition of the native vegetation. Plants relying solely on seed reproduction may be eliminated, because the interval between fires may be too short to allow the plants to mature, flower and set viable seed.

#### **Become a Firefighting Volunteer**



Joining a volunteer rural fire brigade does

not necessarily mean a large commitment of time. Brigades have a range of jobs available including support, administration and communications as well as frontline firefighting. If you would like to find out more about becoming a volunteer, contact the Blue Mountains Rural Fire Service. You will then be put in touch with the Brigade Captain for the unit closest to your home.

#### What to do When Fire Approaches

There are many things that individuals can do to minimize damage to property and to minimize the risk of personal injury. Probably the most important issue for personal safety is protection from radiant heat and smoke. Unless it is impossible to change clothes, follow these guidelines:

V Wear loose fitting overalls or long-sleeved shirt and pants made from natural fabrics, NOT synthetics, which may melt and cause injury. Underwear and socks should also be of natural fibres.



✓ If available, wear safety goggles, gloves, a hat and smoke mask (or a large, wet handkerchief over mouth and nose).

## **Fire Approaching Your Home**

Keep informed via radio reports.

V Hose down the house walls, roof and garden (use sprinkler system if available).



Block downpipes and fill gutters with water.

**V** Fill baths, sinks, buckets and other containers with water (to be used to douse fires that might be caused by embers entering the house).

V Place wet towels and blankets against gaps in doors and windows.



Close curtains and shutters.

V After the main fire passes put out spot fires (any small fires in the garden or on

structures).

V If the house catches fire, stay low under smoke and evacuate as soon as main fire front has passed.

V Evacuate if ordered by police or fire fighters.

#### In a Motor Vehicle

Cars are suitable as shelter only when located in an areas clear of fuel and out of direct contact by severe flames. Find a clear area with at least 10 metres of space above; rake litter from under and around the car.

V Turn engine off and leave lights on.

Wind up windows and close vents.

V Put on protective clothing.

V If possible, put wet woolen blankets over seats and over the occupants who should lie on the seats or floor.

Hang towels on insides of windows (which may shatter in the heat).

V Stay in the car until the fire has passed or until heat is intolerable.

V The petrol tank is unlikely to explode!

#### **On Foot**

X Don't go bushwalking on days of fire danger! If in doubt, check with the National Parks and Wildlife office.

Cover up as much as possible.

V Try to remain calm; don't run in a panic as that will waste energy.

Move downhill (fires travel most rapidly up slopes).

V Look for safe area such as previously burnt vegetation, dams, pools (not elevated tanks as the water temperature can reach dangerous levels).

If flames are more than a metre high, don't try to go through them to a safe area.

If trapped, lie as flat as possible behind whatever shelter is available in the most vegetation-free area that you can find and cover yourself with a blanket or earth.

Check Fire Danger with the National Parks and Wildlife Service before bushwalking in the Blue Mountains.

#### **Fire Retardant Planting**

All plants will burn but some burn more easily and more intensely than others. Fire retardant plants are those which slow the progress of a fire and thus assist in fire control. There is not a lot of published data on fire retardant plants but the following guidelines will help in selecting (or rejecting) plants:

- Plants with a high content of volatile oil or resin in their trunk, branches or leaves burn fiercely. This includes many conifers, melaleucas, bottlebrushes, tea-trees, boronias, mint bushes and eucalypts, however....
- Smooth-barked eucalypts are regarded as fire-retardant by providing an effective screen for sparks and embers if the foliage is high off the ground.
- Dense-crowned trees with fine leaves (e.g.*Allocasuarina* and *Casuarina*) can also be effective windbreaks and filters for sparks

- Plants whose leaves have a high moisture content, e.g. Rainforest plants, fruit trees, are usually highly fire-retardant.
- Plants with a high salt content in their leaves, e.g. saltbushes, are also very fire-retardant.

The information in the following table is based on a number of sources. The information must, however, be used with caution as much of it is anecdotal.

## Some Fire-retardant Plants for the Blue Mountains

Species	Common Name S	ize (m) H x W	<b>Other Characteristics</b>
			(see Legend)
Trees and	Large Shrubs		
Acacia binervia	a ✔ Coast myall	18 x 12	Y; B2; S1; F2
Acacia dealbat	a Silver wattle	6 x 5	Y; B2; S1-S2; F2
Acacia elata V	Cedar wattle	10 x 6	C; B2; S1-S2; F2
Acacia howittii	Sticky wattle	6 x 5	Y; B2; S1-S2; F1
Acacia longifol	<i>lia V</i> Sydney golden w	vattle 5 x 4	Y; B2; S1-S2; F2
Acacia melano.	xylon <b>V</b> Blackwood	15 x 12	Y; B2; S1-S2; F1
Acacia parvipii	nnula 🗸 Silver stemme	ed wattle 7 x 4	Y; B2; S1-S2; F1
Acacia pravissi	<i>ima</i> Ovens wattle	5 x 3	Y; B2; S1-S2; F1
Acacia promine	ens Golden rain w	attle 9 x 6	Y; B2; S1-S2; F2
Acacia vestita	Hairy wattle	4 x 3	Y; B2; S1-S2; F2
Acmena smithii	<i>i</i> Lilly pilly	16 x 10	W,P; B1; S1-S3; F2
Alphitonia exce	elsa Red ash	16 x 8	W; B1; S1-S3; F2
Angophora cos	<i>tata V</i> Sydney red gur	n 15 x 7	W; B1; S1-S2; F2

Banksia integrifolia Cos	ast banksia	6 x 3	Y; B1; S1-S2; F2
Brachychiton populneus K	lurrajong	8 x 6	C; B2; S1-S2; F1
Buckinghamia celsissima I	vory curl flower	5 x 3	W; B1; S1-S2; F2
Callicoma serratifolia ✔ E	Black wattle	6 x 4	C; B2; S1-S2; F1
Calodendrum capense 🗙 🕻	Cape chestnut	12 x 10	P; B2; S1-S2; F2
Castanospermum australe	Black bean	20 x 7	R; B1; S1-S2; F2
Ceratopetalum apetalum 💙	Coachwood	15 x 7	R; B2; S1-S2; F1
Corynocarpus laevigata X	NZ laurel	6 x 3	C; B2; S1-S2; F3
Cupaniopsis anacardioides	Tuckeroo	10 x 8	W; B2; S1-S2; F2
Eleocarpus reticulatus ✔	Blueberry ash	5 x 3	W,P; B1; S2-S3; F2
Ficus benjamiana	Weeping fig	12 x 10	R; B1; S2-S3; F3
Glochidion ferdinandi	Cheese tree	6 x 4	C; B1; S1-S3; F2
Grevillea"Ivanhoe"	Grevillea	4 x 3	R; B1; S1-S2; F2
Grevillea shiressii	Blue grevillea	4 x 3	B; B1; S1-S2; F2
Hymenosporum flavum	Native frangipa	nni 7x4	Y; B2; S1-S3; F2
Hakea salicifolia	Willow-leafed h	nakea 4 x 4	W; B1; S1-S2; F2
Jacksonia scoparia ✔	Dogwood	4 x 2	Y; B2; S1-S2; F2
Lagunaria patersonii	Norfolk Island	hibiscus 10 x 7	P; B2; S1-S2; F2
Lomatia myricoides ✔	Long-leaf loma	tia 4 x 3	W; B1; S1-S3; F1

Melia azedarach ✔	White cedar	15 x 20	W; B2; S1-S2; F1
Metrosideros excelsa X	NZ Christmas tree	8 x 7	R; B1; S1-S2; F2
Magnolia grandifolia X	Lge.flowered magn	olia 10 x 8	W; B2; S1-S2; F2
Photinia serrulatra X	Chinese hawthorn	5 x 4	W; B2; S1-S2; F1
Platanus orientalis X	Oriental plane tree	20 x 5	C; B2; S1-S2; F1
Pittosporum revolutum J	Hairy pittosporum	5 x 4	O; B1; S1-S3; F1
Pittosporum rhombifolium	Pittosporum	5 x 4	O; B1; S1-S3; F2
Podocarpus elatus	Plum pine	20 x 15	B; B1; S1; F1
Schinus molle X	Pepper tree	8 x 7	P; B2; S1-S2; F2
Stenocarpus sinuatus	Firewheel tree	6 x 5	R; B1; S1-S3; F2
Syzygium paniculatum	Scrub cherry	10 x 7	R; B1; S1-S3; F2
Waterhousea floribunda	Weeping lilly pilly	10 x 7	R; B1; S1-S3; F2
Small and Medium Shrub	S		
Acacia elongata ✔	Swamp wattle	2.5 x 2	Y; B2; S1-S2; F2
Acacia fimbriata"Dwarf"	Fringed wattle	2 x 2	Y; B2; S1-S2; F1
Acacia oxycedrus ✔	Spike wattle	2.5 x 2.5	Y; B2; S1-S2; F1
Acacia sophorae	Coastal wattle	2 x 4	Y; B2; S1-S2; F3
Acacia terminalis ✔	Sunshine wattle	2 x 1.5	Y; B2; S1-S2; F1
Atriplex nummularia	Old man saltbush	2 x 2	Y; B2; S1; F2

Atriplex rhagodioides	Silver saltbush	1.5 x 1.5	C; B2; S1; F2
Banksia marginata ✔	Silver banksia	1-4 x 1-3	Y; B1; S1-S2; F2
Bursaria spinosa ✔	Sweet bursaria	1.5 x 1.5	C; B1; S1-S2; F1
Dodonaea viscosa	Hop bush	2 x 1.5	R; B2; S1-S2; F2
Eremophila maculata	Spotted emu bush	1 x 1	R,Y,O,P; B1; S1-S2; F2
Grevillea "Coastal Glow"	Grevillea	2.5 x 2.5	R; B1; S1-S2; F2
Grevillea "Orange Marmala	ade" Grevillea	2 x 2	O; B1; S1-S2; F2
Grevillea victoriae	Royal grevillea	1.5 x 1.5	R; B1; S1-S2; F1
Hakea dactyloides✔	Finger hakea	2.5 x 2.5	W; B1; S1-S2; F1
Hakea drupacea	Sweet hakea	2.5 x 2.5	W; B1; S1-S2; F2
Lomatia silaifolia ✔	Wild parsley	1 x 1	W; B1; S1-S2; F1
Maireana brevifolia	Blue bush	1 x 1	R; B1; S1; F2
Maireana sedifolia	Blue bush	1 x 1	C; B1; S1; F2
Myoporum insulare	Boobialla	2.5 x 2.5	W; B2; S1-S2; F1
Photinia glabra"Rubens"	Photinia	2.5 x 2	W; B2; B1-B2; F1
Rhagodia baccata	Coastal saltbush	1 x 1.5	R; B1; S1; F2
Rhagodia nutans	Saltbush	1 x 1.5	R; B1; S1; F2
Senna odorata	Cassia	0.5 x 1	Y; B2; S1-S2; F2

Groundcovers, Climbers and Rockery Plants

Acacia howittii"Prostrate"	Sticky wattle	0.3 x 2.5	Y; B2; S1-S2; F1
Ajuga australis	Austral bugle	0.3 x 0.5	B; B2; S1-S2; F3
Dichondra repens	Kidney weed	0.1 x 1	C; B3; S1-S3; F1
Eremophila debilis	Winter apple	0.1 x 1	B; S1-S2; F3
Grevillea xgaudichaudii V	Grevillea	0.3 x 2	R; B1; S1-S2; F1
Grevillea "Royal Mantle"	Grevillea	0.3 x 3	R; B1; S1-S2; F1
Hardenbergia violacea ✔	Native sasparilla	Twiner	B; B2; S1-S2; F1
Isotoma axillaris	Showy isotome	0.3 x 0.7	B; S1-S2; F1
Kennedia prostrata	Running postman	0.1 x 1.5	R; B2; S1-S2; F1
Kennedia rubicunda ✔	Dusky coral pea	Twiner	R; B2; S1-S2; F1
Myoporum parvifolium	Myoporum	0.3 x 1.5	W; B2; S1-S2; F2
Portulaca oleracea	Pigweed	0.1 x 1	Y; S1-S3; F2
Scaevola aemula	Fan flower	0.2 x 0.5	B; S1-S2; F2

## Legend

Flower or fruit colour: C=cream, Y=yellow, W=white; R=red; P=pink; B=blue; O=orange

Bird attraction: B1=attracts honeyeaters/fruit eaters, B2=general attraction

Aspect: S1=full sun, S2=part shade, S3=shade tolerant

Frost tolerance: F1=tolerant, F2=moderately tolerant; F3=may be damaged by heavy frost

 $\checkmark$  = Native to Blue Mountains,  $\checkmark$  = Not an Australian native

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