The Role of Replacement Planting

Fire retardant plants can absorb more of the heat of the approaching bushfire without burning than more flammable plants. They can trap and absorb water and apply chemicals that reduce wind speed near your house. They will compete for nutrients and water, so they will reduce the fire risk. Fire retardant species can be used to slow the travel of a fire through the litter layer and fire resistant shrubs can be used to separate the forest from the clearing. If the low flammability plants are used in conjunction with additional protection such as sprinklers and fire retardant covers, then they can be very effective in preventing a fire from spreading through the vegetation.

There are two basic factors to be considered in determining a plant’s flammability: the first is how readily the parts burn and the second is in which parts they are combined. There are many lists of plants in books but unfortunately most should be treated with suspicion because they haven’t been tested in an acceptable way. The trouble with a lot of the books is that they don’t tell us which aspects of flammability are included and how they are combined.

Tasting the flammability of individual pieces of plant is usually done by taking a section of leaf and subjecting it to a flame and measuring how quickly it burns. If you are wondering about the flammability of a few different plants, you can get a good idea using an LPG torch on pruned branches. Plants will of course burn differently once they are dead and dry and so it is usual to test both green and dead samples. Plants with broad fleshy leaves are better than those with fine hard leaves (sclerophyll). Those with significant amounts of volatile oils, like the eucalypt family which includes eucalypts and tea-trees, should be avoided. The influence of plant shape is a lot more subjective: low growing plants and ground covers are better than shrubs; plants with dense foliage are better than those withopen airy crowns; plants which don’t retain dead material are better than those which hold up lots of fuel; plants with smooth bark are better than those with ribbon and rough bark.

It is also necessary to realise that establishing a fire retardant garden will take time, money and lots of hard work. Many plants do not reach maturity for up to 15 years and therefore will not provide effective fire protection for some time. In comparison, other plants have shorter life spans and may continually need to be replaced.

Environmental Weeds

All gardeners should be aware that some plants are not wanted in the bush even if they are valued in the garden. Unfortunately there are many ornamental plants which can really take off when they get into the bush. Some do so well they choke out the natives, like blackberries, or become a fire hazard, like gorse.

Many environmental weeds were brought to Tasmania as ornamental or food plants and have found conditions to their liking. Most are not particularly affected by pests and diseases and so have a head start over the local plants. Predicting whether a plant will become an environmental weed is not easy so it’s good practice to use native plants in gardens close to bushland. Known environmental weeds in Tasmania that have moderate or higher flammability should be doubly avoided and are shown on the plant flammability list.

For further information consult your local DPIPWE or Council weed management officers. A useful pamphlet is "Garden Plants are Going Bush… and Becoming Environmental Weeds" published by the Society for Growing Australian Native Plants.
Introduction
All vegetation will burn in a bushfire and pose a hazard to people and their homes. However, not all vegetation has the same flammability and there is great potential for reducing bushfire prone areas to reduce their fire hazard by changing the plants in their gardens.

Flammability Groups
In the following list E denotes an exotic plant, AN a plant native to mainland Australia, X a known environmental weed.

High Flammability
These plants have been shown to be highly flammable and should not be planted or allowed to remain inside your house’s Building Protection Zone. They should also be avoided in the Fuel Modified Zone. Move these plants away from your house and replace them with less flammable plants.

Moderate Flammability
These plants should be avoided in the Building Protection Zone. They should not be allowed to dominate your garden and should be well maintained, being especially careful to remove dead material before it accumulates.

Low Flammability
These plants are acceptable in the Building Protection Zone and will be valuable replacements for more flammable plants.

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