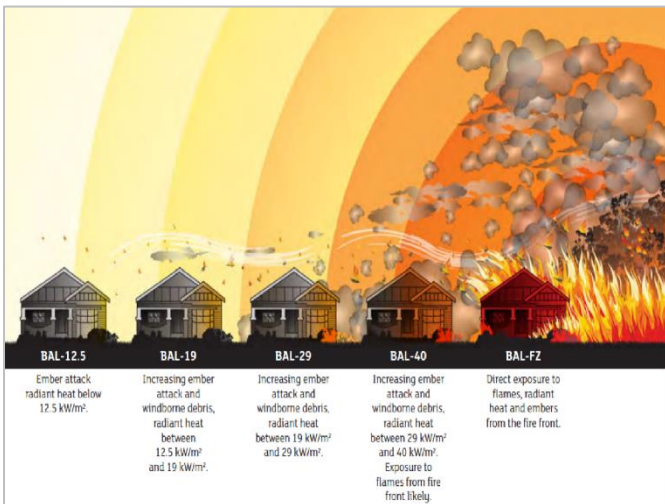


Bushfires & Designing Your Garden

Why does garden design & plant selection matter?

Victoria is one of the most fire-prone areas in the world with large parts of the state comprising of highly flammable dry eucalypt forest and protracted droughts. Bushfires are a natural and challenging feature of the Victorian landscape. Bushfires don't discriminate; they burn large forests, small farms, and backyard gardens alike.

Forms of bushfire attack



Generally, bushfires attack in three ways; ember attack, radiant heat and direct flame contact.

- Ember attack is the most common way houses catch fire during bushfires. Fuel such as burning twigs, leaves and pieces of debris are carried by the wind and land on or around houses.
- Radiant heat, the heat you feel when standing near a fire, is the biggest killer in bush fires. The best protection from radiant heat is distance.
- Direct flame contact occurs when conditions such as fuel, wind and topography enable fire to approach and impact your home.

It is important to choose plants, vegetation and placements that will not enhance the forms of bushfire attack.

Garden design & landscaping in bushfire prone areas

When designing your garden and preparing for bushfire, plant selection, placement and maintenance, along with the type and application of materials used in your landscape can significantly reduce a house's vulnerability to the impacts of fire.

You can control the amount of bushfire fuel near your home by careful garden design and choosing the right plant species. However, although your house will be at less risk if you remove most of the flammable material from around it, it is possible to reduce risk whilst maintaining aesthetics and providing shade and shelter.

The CFA has set out four principles for garden design:

- Plant to create defensible space
- Remove flammable objects from around the house
- Break up fuel continuity (keep plants separate and avoid flammable mulches)
- Carefully select, position and maintain trees

Choose more fire resistant plants and trees

Although no plants are fully fire resistant, some plants are less likely to catch fire than others. Choosing plants with low flammability and locating them correctly will reduce bushfire risk around your home.

Generally, plants with compact dense growth, broad, flat, thick or soft, fleshy leaves contain more moisture than very fine needle-like leaves and are less likely to dry out and burn during a fire.

Scented plants contain waxes and oils that add to flammability. Avoid plants with closely packed branches as they are also more likely to burn easily. These plants also trap a lot of dead material which increases their flammability.

When choosing trees, select trees with smooth bark and low oil content as they are less flammable and they produce less fine fuel than trees with ribbon, paper or stringy bark.

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Avoid trees with low level branches as they provide an opportunity for the fire to travel from the understory to the tree canopy.

Shade your garden with trees that have dense foliage and spreading canopies or build shade structures.

The Victorian Country Fire Authority has developed a handy tool called a Plant Selection Key to help gardeners choose fire-wise plants. See *Further information* at the end of this document for further links to plant and tree lists.

Placement, defensible space/fire smart buffers

When designing your garden, it is important to create spaces within the landscape that will slow or reduce a fire's intensity, provide protection and distance from radiant heat, and reduce the wind's ability to blow embers direct onto your house. Although these trees may provide a buffer from radiant heat, it is important they are fire-wise species.

Choose native or exotic grass species that remain green throughout summer if planting close to buildings. Use succulent shrubs as a low maintenance, non-thirsty ground cover. Less flammable ground cover plants can reduce the speed of fire and make it hard for fire to reach your house. A row of dense tall shrubs around the house can act as a windbreak and filter and deflect embers. Trees that are planted downwind from the likely direction of a fire are less likely to spread embers to your house.

As a general rule, trees that grow higher than four metres should not be planted closer than ten metres from any structure. Create breaks between fuels horizontally along the ground and plant in small groups, rather than continuous runs. Pavers, rocks, pebble beds and fish ponds can also provide habitat for wildlife.

Fuel Management/maintenance

Fuel, i.e. combustible material, is a major factor influencing the intensity and spread of bush fires. When living in bush fire prone areas, it is important to undertake an annual maintenance program prior to, and during, the fire season. Wherever possible, incorporate mechanical maintenance into your annual plan.

Reduce the amount of bush fire fuel (leaf litter, twigs, dead branches, debris) around your house, under trees, in gardens and against structures. Unkempt gardens are more likely to lead to a damaged or destroyed house.

Remove low level branches from trees to avoid "fire ladders". Slash, mow or graze animals on grasses around the home, trim bushes, remove branches overhanging structures and, if possible, keep gardens around the house moist and green which should reduce their flammability. Although this is not always possible, selecting fire-wise plants that are also drought tolerant is worth considering.

What landscaping materials should I choose?

When choosing mulch for your garden, stone, gravel and sand are much safer options than organic products such as wood and straw. If using wood, products finer than a pencil diameter should not be used. Hardwood chips are a better alternative to fine shredded pine bark as they contain less particles which can ignite and fuel ember attack.

The impact of mulch depends on where it is in relation to buildings and vegetation and the on ground design however, in reducing ember attack, heavier, non-flammable mulches are most effective.

Further information

There are many excellent resources available, a selection are listed below:

The Country Fire Authority (CFA) provides excellent information for bushfire prone areas.

<https://www.cfa.vic.gov.au/plan-prepare/how-to-prepare-your-property/landscaping>

Fire Resistant/Retardant Plants

Australian Plants Society (Victoria)

<https://apsvic.org.au/fire-resistant-and-retardant-plants/>

Deep Green Permaculture

<https://deepgreenpermaculture.com/>

Tasmanian Fire Service

<https://www.fire.tas.gov.au/publications/1709%20Brochure.pdf>

Contacting Council

If you require any further information, contact the Latrobe City Council Municipal Fire Prevention Officer:

1300 367 700,

<https://www.latrobe.vic.gov.au/Community/Emergencies/Fire>

See Latrobe City Council Information Sheets:

Vegetation Management - 10/30 and 10/50 Rules Explained

Landowner Bushfire Prevention Obligations

Roadside Vegetation Management & Firewood Collection

Fire Prevention Notices