

Bushfire safety

1. Do not panic

Bushfires range from low intensity (low flames, little heat produced) and slow moving – which can be controlled safely – to high intensity infernos which race across the landscape and are virtually uncontrollable and deadly: what are you dealing with?

2. Assess the problem

- i. Personal safety – highest priority
- ii. Safety of others – high priority
- iii. Property – low priority (except a vehicle to escape in)

3. Options

- i. **Fight?** Is this a sensible strategy?
Is any assistance available: who, where, & how soon?
- ii. **Flight?** Where is it safe to go?
When do I need to go?

Telephone or radio a message to the local fire brigade or police:
contact **000** if you do not know the local number.

4. Protective clothing

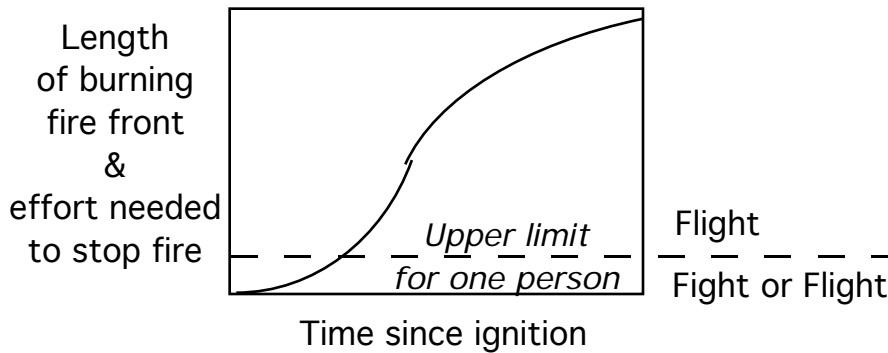
Cover up your skin (long sleeves, trousers), wear boots, a hat (ideally a helmet) gloves, a towel over your nose and mouth, eye protection (glasses or goggles) – everything to stop radiant heat or flames burning you and to minimise smoke inhalation: soak clothes in water if available. Ideally the fabrics should not be synthetics, which can melt, but cotton or wool. Matches allow you to start a back-burn, but see notes below.

5. Fighting a fire

You might stop a fire that has just started - before it becomes dangerous - if the area is still tiny (eg. only a few metres across) & the intensity low (flames < 50 cm). Techniques include:

- beat it out with a branch, spade or a heavy cloth (preferably wet),
- throw or spray water from a back-pack on the fire front,
- scrape fuel away to create a bare fire-break in advance of the fire, or push smouldering fuel back into the fire if you have a rake (hot work!). A fire-break of 1-2 metres can stop a low intensity fire (increasing to breaks of hundreds of metres for extreme forest fires).

However, fires spread outwards so the fire edge can rapidly become too long for you to control (see diagram below): this is the time to get away and get the assistance of a fire brigade!



The sooner a fire brigade can arrive, the smaller the fire front and the faster it can be dealt with. Grass fires can be suppressed directly with water sprayed from fire tankers, provided the fires are not too intense, eg. flames below head-height. No-one stands in front of an intense bush fire with a hose and expects to stop it – you would be incinerated. An established large or intense fire is uncontrollable except by removing fuel in advance (eg. bulldozed firebreaks, usually plus back-burning to destroy fuel). Back-burning to stop an approaching fire needs a bare-ground barrier (eg. road) as the starting line and a fire brigade(s) to suppress any ‘spot’ fires that jump the barrier – often airborne smouldering embers. Without assistance a back-burn could get out of control and put you at even greater risk, so it is not recommended for the inexperienced.

Water-bombing from the air can suppress a fire locally (eg. a spot fire, a house) but the resources are rarely available to stop a long fire front. If water-bombing is used overhead, lie down in the open and protect your head: a ton of falling water can cause great damage, either directly or by breaking branches, roofs etc.

6. Getting away

If a bushfire is approaching, you need to know how and where to get away and what to do if you get trapped. You need a plan. Can you get out of the area or are you seeking a “safe site” to stay in as the fire goes past? It is better to prepare a safe site (see below) than simply be run down by the fire.

Vehicles

If you have a vehicle then use it: it can shield you from heat and low flames, and get you away faster. If there is no choice drive through low flames but not too fast if you cannot see obstacles – you do not want to crash. A moving vehicle is unlikely to burst into flame or explode. A stationary vehicle, parked where there is little fuel, can be a shelter for a few minutes as a fire front passes: close the windows, cover yourself with a cloth (eg. woollen blanket) and bend down below the window level to minimise radiant heating. Dump gas bottles and flammable liquids away from the car. If the car catches fire or overheats you need to evacuate, probably into the area which has burnt. The interior plastics can generate toxic fumes. If the fuel catches fire it is most likely to be as a jet of burning vapour from the filling pipe rather than an explosion, tyres also burn fiercely once ignited, so the car changes from a shield to a furnace.

Vehicles should carry a water-filled back pack spray unit, and fire blanket as well as a foam extinguisher for use on the vehicle.

7. Safe sites

If you cannot get out of the path of the fire, three aims are to:

1. Get into an area with little fuel (ie. dry grass, forest litter). Bare or rocky ground or a farm dam are good options (but not metal tanks on wooden stands - “cooking pots”). You might scrape an area clear of fine fuel if you have time, and scoop a trench to lie in to shield off the heat. Hide beneath a damp cloth (preferably not synthetic that might melt) or space blanket (that reflects heat). Once an area has burned, and cooled, it is a good refuge but take care to avoid charred standing trees (especially dead or hollow “chimney” trees) that may collapse without warning. Do not shelter beneath electrical power lines as smoke can allow them to arc to the ground.
2. Get upwind of the fire if possible, so the wind is pushing the fire and smoke away from you. However, be aware that winds vary greatly in direction, partly due to the fire itself, and may swing around 180° (eg. evening breezes), so this should not be your only defence. Smoke can be a serious nuisance: you cannot see what is happening and it can be choking – a face-mask or cloth and goggles are desirable.
3. In hilly country get down-slope of the fire because fires burn more slowly and less intensely going down-slope but accelerate up-slope, burning more rapidly and therefore putting out a lot more heat. Do not watch a fire burning along or down the opposite side of a valley from the other slope – the “dead-man’s last view” is great until the fire jumps or spots onto the slope below you. An intense fire might race up a slope much faster than you can run away.

8. Planning to avoid bushfires

Be aware that hot, dry weather and high wind speeds are two of the main factors that increase the flammability, intensity and rate of spread of fires. You can plan to avoid visiting sites that have a high fuel load or that are inaccessible during such weather conditions. This applies both seasonally and each day: the early morning is generally much safer than the afternoon. . If the predicted temperature is above 35°C and wind speeds are over 30 km hr⁻¹, take especial care.

Bushfires are often ignited by lightning so beware of thunderstorms, especially if there is no rain. Spot fires can start from airborne embers, up to several kilometres downwind from the source. Many bushfires are ignited by people, common avoidable sources being:

- Cigarettes that are not extinguished.
- Campfires that are left smouldering – they may need dousing with water.
- Hot vehicle exhausts and engines in dry grassland. Clear debris that collects under your car and do not stop in tall dry grass, especially ‘spinifex’.
- Metal scraping on stones that causes sparks (eg. mower blades, grader blades, vehicle accidents)

- Electrical sparks
- 'Control' fires that get away.
- Arson, often by boys and young men.