

Bushfire Activity

Bushfire Behaviour

All fires need fuel, air and heat to start and develop. Bushfires in particular behave in a number of ways, often unpredictable in nature. The intensity and size of this kind of fire is heavily reliant upon the amount of these elements accessible to it. This means that the most severe bushfire threats often occur in summer when a combination of high temperatures, strong winds and lightning from thunderstorm activity can combine.

Fuel

Vegetation around your home such as dry grass, leaves, twigs and bark can provide fuel for a fire. This fuel plays a part in how hot a fire can become and how fast it can spread. If fuel is removed, the fire will starve.

Heat and Radiant Heat

Bushfires generate enormous heat. Much of this heat goes up into the air, but significant heat also radiates at ground level. This radiant heat spreads the fire by drying out vegetation so it will burn. Radiant heat is the main cause of people dying in a bushfire. Radiant heat may not set fire to your home, but can crack and break windows, allowing embers to enter and result in a house fire.

Embers

Even if the fire front does not reach your home, it can still be damaged by burning embers carried by strong winds. Embers can get into your home through gaps in roofs, walls, evaporative air conditioners, windows and doors. They can also land on materials that burn easily, starting a fire. Research has shown that ember attack is the main cause of buildings catching alight during a bushfire. Embers can continue to threaten your home even after the fire front has passed.

Direct Flame Contact

When materials close to your home catch fire, flames can touch the outside of your house. How long flames are in direct contact with home buildings depends on the amount of fuel to be burnt.

Oxygen

Bushfires need oxygen in the air to stay alight and the more available, the faster the fire burns. Strong winds not only force the fire along, but also increase air circulation, providing more oxygen. Any change in wind direction or speed can rapidly increase the rate of spread and the direction of the fire.

Wind

Strong winds usually come with bushfires and as the wind increases so does the fire's temperature. The wind pushes flames closer to fuel making the fire travel faster. Embers and other burning materials are also carried by the wind, which can damage buildings kilometres from the fire front.

For more information in relation to preparing you, your family and home, visit the [Department of Fire and Emergency Services site](#).