

Community Information Sheet

Bushfire bunkers

There has been some discussion in the media of whether people in fire affected areas should build bunkers to protect themselves from bushfires. The purpose of this Community Information Sheet is to explain the current situation on bunkers. In summary:

- It is not compulsory to build a bunker.
- Bunkers may not be a safe option in all cases.
- There are no technical standards currently in place for bunkers.
- People who are considering installing or building a bunker should obtain professional advice.

What is a bunker?

A bunker is a place where individuals can take refuge during a bushfire. This may include a fire shelter, which is separate from the house, but it could also include a cellar, or a safe room.

Is it compulsory to build a bunker?

No. New houses in Victoria are required to undergo a Bushfire Attack Level assessment, which may give rise to construction requirements under Australian Standard AS 3959-2009 "Construction of buildings in Bushfire Prone Areas". However, there is no legal requirement to build a bunker and they are not regulated by AS 3959-2009.

Do bunkers save lives?

At this stage, there has been no conclusive research on this point. A well designed bunker may improve an individual's chance of survival in a bushfire. However, a number of people have died while sheltering in bunkers of one form or another.

Are there any recommended bunker products?

No. There are a number of bunker products already in development or on the market, some in the form of concrete tanks. However, there are currently no technical standards for the manufacture of these products or standards for their construction. AS 3959-2009 "Construction of buildings in Bushfire Prone Areas" does not provide any construction requirements for bunkers.

This means that none of the products currently available have been tested against a recognised standard. For this reason, we cannot endorse or recommend any of these products.

Are you considering a bushfire bunker?

If you are considering building a bunker, there are a number of issues, which you will need to consider:

Location

- The bunker should be well signposted to assist emergency services in locating it.
- The bunker should be located so that collapsing structures or trees do not prevent access/egress.
- The maintenance of vegetation conditions around the home and other structures.
- The bunker should be sited so that there is a safe path from the house to the bunker. This may involve removal of hazardous vegetation around the bunker and along the path from the house to the bunker.
- The bunker should not be located too close to fire hazards.

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Construction

- The bunker must be able to withstand high wind and the impact of collapsing structures or trees.
- If the bunker is underground, it needs to be waterproof, and able to withstand vehicles driving on top of it.
- The bunker must be resistant to flames, high temperatures, and ember attack.
- The bunker must have fire resistant windows or some other way of allowing the occupants to know when it is safe to leave the bunker.
- Doors should be fire resistant, and should be made of material that has a relatively low conductivity.
- You should consider the direction in which the door swings, and the locking and latching mechanisms, as well as the level of fire resistance and heat conductivity of the door material.

Amenity

- The bunker must be big enough to hold the expected number of occupants.
- The bunker must have an air supply, or be sufficiently large to hold enough air to allow the occupants to remain inside until it is safe to leave the refuge.
- The bunker must be able to exclude smoke, and must be well insulated to prevent the temperature inside the bunker from increasing beyond a safe level.
- Note that in bushfire conditions services and equipment such as electricity, phone, radio, water, pumps, and sewerage usually become inoperable.

A bunker should not be used for any purpose which could prevent its use in a bushfire – for example, storage of flammable liquid. The space should be kept clean and dry, and free of spiders, snakes, and other animals.

It is important that you seek the advice of a Registered Building Practitioner (RBP), such as a fire safety engineer, or a structural engineer or other suitably qualified practitioners, prior to purchasing or constructing a bunker, or modifying an existing building to be used as a bunker. To find a RBP go to the Building Commission website at www.buildingcommission.com.au

We urge you to consider your options carefully, and to view building options such as bunkers as a part of your overall fire plan, rather than a simple solution. You also need to consider whether you and your family are psychologically ready to stay in the bunker during a fire.

The future

Visit our website from time to time for information about new developments in this area. www.buildingcommission.com.au