

Choosing fire-resistant building materials is the first step in safeguarding your home and your family.

BY RACHEL SULLIVAN

MIRACLE MATERIAL

GETTY IMAGES

In Australia, the threat of bushfires is part of life

especially over the hot, dry summer months. Fire is part of the native vegetation's natural regenerative cycle, but it can have devastating consequences when it enters nearby houses and suburbs.

Macquarie University's Natural Hazards Research Centre estimates that 4.1% of homes nationally fall in the extreme/high fire danger zone within 80 metres of bushland, particularly in Sydney. But as the 2003 Canberra bushfires showed – when 530 suburban houses were destroyed – other homes are still at risk from freak bushfires. Many of these homes were located away in the suburbs, far from the high fire danger zone.

It's not just bushfires that can incinerate houses. Homes are also at risk of regular house fire events, such as heater fires, forgotten candles or misplaced cigarettes.

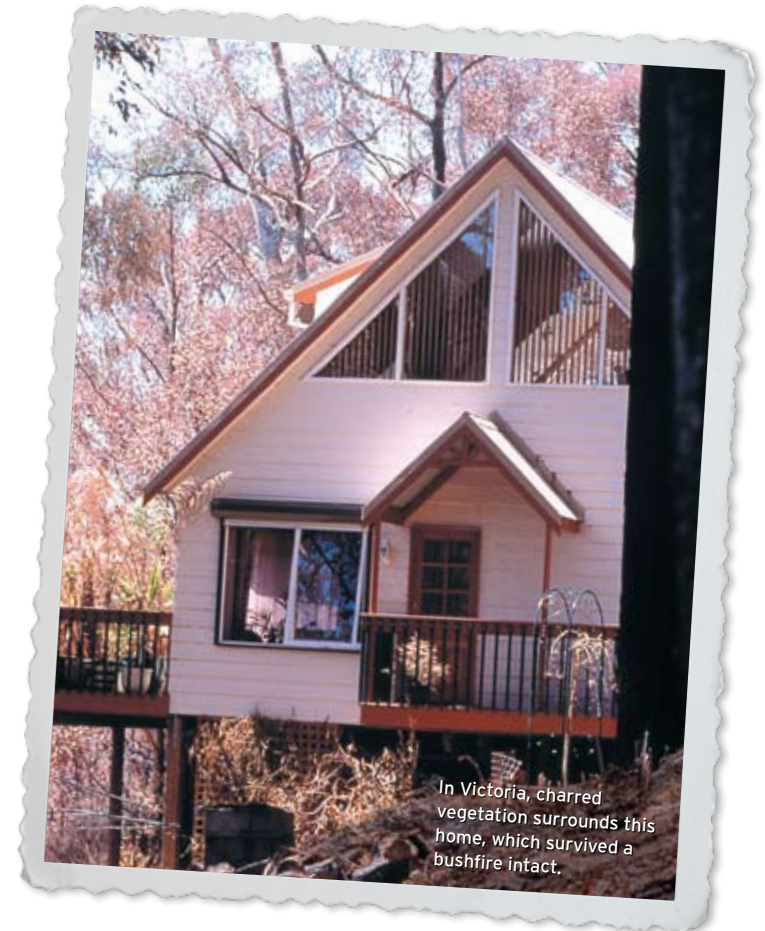
BEATING THE DEVIL

Experts agree that in order to reduce the risk of property damage and loss associated with bushfires, the design and siting of buildings is of paramount importance. For example, according to the Royal Australian Institute of Architects' (RAIA) Bushfire Design Guide, you should ensure there is enough cleared land between the house and the bush, or avoid steep hillsides where the intensity of the fire can double for each 10 degrees of slope. Also important is your choice of building material, which will not only protect the home from bushfire, but also help defend it against other fire events.

Home owner John Irving had first-hand experience of this when fire tore through the bush surrounding his HardiPlank® weatherboard clad house. He was certain that he would return to little more than a charred wasteland. Indeed, the once tall trees and bushland surrounding his property were devastated, but, miraculously, his house was almost untouched.

"When we extended our house, we decided to re clad it with HardiPlank from James Hardie. We liked the weatherboard look, and we also knew that it is a fire-resistant material. This is essential in our fire-prone area, which is in the part of Victoria's Dandenong Ranges known as 'Devil's Chimney' for the number and severity of fires we experience," says Irving.

"You occasionally see stories in the media of all the houses in a street being destroyed except one, which was



In Victoria, charred vegetation surrounds this home, which survived a bushfire intact.

untouched. We had just been fortunate enough to build our house from a building material that doesn't burn – if our house had been made from timber or another (combustible) product we would almost certainly have lost it.

"But because we made the right choice in building materials at the beginning, it's still standing," he says.

Deemed non-combustible by the Building Code of Australia, building products like James Hardie's HardiPlank weatherboard and the innovative Scyon™ range of products are ideal for use in Australian bushfire-prone areas.

DEFENCE TACTICS

Of course, external cladding is not the only element that needs to be considered when designing homes in high fire danger areas. A recent study showed that the most prominent features involved in direct ignition by ember were timber decks (19%), followed by eaves and gutters (17%) and then window frames (10%).

There are a number of landscaping features able to slow the momentum of a bushfire, such as bodies of flowing or stationary water – like swimming pools – irrigated or green summer crops, orchards, gardens or tennis courts. Windbreaks and barriers may be created with certain bushfire-resistant tree species.

Most houses actually survive the few minutes of the fire front, only to burn down later due to fire spreading from ignitions caused by ember attack (wind-borne burning debris). Even then the houses usually burn from the inside out, so as well as using fire-resistant building materials, keeping burning embers out of the house with shutters, covered gutters and special roof-mounted sprinkler systems are key to defending your home against a bushfire. ■

Inferno proof!

In St Paul (Minneapolis, US) a townhouse under construction caught fire, producing one of the hottest fires local firefighters can remember. The fire reached such proportions that trees across the street caught fire, as did two fire trucks sitting about 20 metres from the building. But lying undamaged less than three metres from the destroyed building was a stack of fibre cement cladding.

A building about 15 metres away, on which the cladding had already been placed, also remained intact, apart from some broken windows. "We feel the cement siding [cladding] is probably what saved the structure," says Jack Hoffman, A-Shift Deputy Chief for the St Paul Fire Department.