



Despite the devastation of the Black Saturday fires, the Hauth family's home in Wandong Victoria still stands.

Learning from a material example

The Black Saturday fires have emphasized the need to take a complete approach to building in bushfire prone areas. Two surviving houses highlight the benefit of fire resistant building materials.

There is no rubber stamp approach to fire-proofing a house. No magic material or guaranteed designed.

In fact, the revised Australian Standard AS3959-2009 *Construction of buildings in bushfire prone areas* outlines the many factors that contribute to fire risk and demands construction requirements accordingly.

Through these strengthened regulations and subsequent education, people in bushfire prone areas will need to look at the design of their house with consideration to the slope of the land, the orientation of the dwelling, the

proximity to trees and forestry, as well as the building materials and construction methods.

Put simply, the best chance of a house withstanding a bushfire requires a complete and complimentary approach.

However, in the wake of the Victorian bushfires there is no denying that consumers will actively seek out fire resistant building materials and rely on builders and designers for advice.

Anthony Milostic is the national technical support manager (Australia and Asia) for James Hardie working extensively with the fibre-cement and Scyon product ranges. Although James Hardie fibre-cement products have been a staple of the building industry for years, the Scyon range is a lightweight cement composite product available in a range of exterior cladding and trim options – as well as internal flooring – launched in 2006.

“The Scyon range has been out for a few years and quickly become popular

– especially in extreme weather areas due to the stability and durability of its composition,” explains Anthony.

“We’ve had fantastic reports from people who have used it in tropical areas, high termite risk areas, climates with strong wind and rain and from properties in bushfire areas.

“In one particular example, we had direct correspondence from Peter McCormack, an owner builder whose property is still standing amidst the devastation in Victoria’s Buxton area (approximately 10 minutes from Marysville) through the Black Saturday fires.”

Peter’s house is an excellent example of a complete approach to building in bushfire prone areas. He took his time to research the environment and how best to use the land as well as the building materials on offer. Equally, he performed regular maintenance and fire preparation techniques on the property.

“The home was designed and constructed with fire resistant planning in mind,” says Peter. “For example, I specifically chose a concrete verandah. The posts are steel and we used Scyon Linea weatherboard for the exterior. When we knew the fire was headed this way, I took the fire experts’ advice and cleared all the gutters, mowed and watered the lawns, whipper snipped tall grasses, cleared the verandahs, closed the screen doors and put as much water around the property as we could.”

Even with this preparation, Peter did not stay on the property when the fire front came through. When he did return, he was shattered by the damage to the area and his direct neighbours, and stunned that his house was still standing.

One of the major keys, Peter believes, was designing the house to prevent ember attack.

“I have no doubt that the weatherboards made a huge difference as many of the houses were ignited by ember attack,” says Peter. “Also, the construction of the house ensured there were no entry points for embers and we made the effort to clear gutters and maintain our landscape so there was nothing to latch on to.”

In a similar story, Nancy and Claus Hauth from Wandong were surprised to see their house intact as neighbours from all sides lost property.

The Hauth’s decision to use PrimeLine weatherboard (from the James Hardie fibre-cement range) was actually made because of its termite resistance; however the non-combustible nature of fibre-cement products was clearly beneficial through the fire.

“Our car had a full tank of petrol,” says Nancy. “It was parked right next to the house and exploded during the fire. Yet the house is still standing and looks like it hasn’t been in the fire.”

What was even more surprising to Nancy was that some of the left-over weatherboards discarded by the shed remained unscathed through the fire.

“Many bushfires pass through very quickly so a large part of preparing a house is ensuring it can withstand ember attacks,” confirms Anthony.

“As many people are aware, embers can fly through hundreds of metres ahead of and behind the fire front. So a major part of construction is choosing the right material and checking the balance it can provide from the external surface to roof, the eaves, window trims and so on.

“You need take a complete approach to the design of your house and ensure you undertake clearing and maintenance. If you then combine it with the use of non-combustible materials such as fibre-cement or our Scyon range, there is no doubt you greatly reduce the chance of embers taking hold.”

The Scyon products are the result of years of development and testing and a major advancement on traditional fibre-cement. The brief was to design a durable product that was easy to work with and the technology has been applied to a range of options from vertical and horizontal cladding through to a geometric panelled finish and even external trim.

“I suppose one of the major advantages in using Scyon is that



Under the revised Australian Standard, people in bushfire prone areas will need to look at the design of their house with consideration to the slope of the land, the orientation of the dwelling, the proximity to trees and forestry, as well as the building materials and construction methods - a complete approach to fire prevention.

it is a complete range," says Anthony.

"Utilising the same technology and development we have created a series of products designed to work together with the same benefits in stability, durability, fire resistance and termite resistance. For example, you may wish to use the Scyon Linea to provide a traditional homestead finish and then use the Scyon Trim for internal and external corners and around windows and doors to receive the same benefits for the whole building envelope. In this sense we believe we have an entire package and not just a component of the package."

The stability of Scyon also means there is very little maintenance required and no prospect of warping or shrinking. Furthermore, the lightweight nature of cladding can make building easier in particular applications.

"A lot of bushfire prone zones are typically hilly areas so it makes sense to build in lightweight cladding materials because heavier building materials will require deeper foundations," says Anthony.

"Our products can be built off traditional floor joist systems, which are off the ground and a lot lighter without the need for major

disturbance to the local site."

Ultimately, Anthony believes that the devastation of Black Saturday will encourage home owners to personally investigate designs and materials that will provide the best opportunity to withstand a bushfire attack.

"I believe this revised Standard highlights many of the different factors that contribute towards preparing your property for a bushfire. The combination of the home's design, orientation on the block, the slope of the land, the type of vegetation around the dwelling, maintenance of the property and the building materials all play a role in determining whether a house can withstand a bushfire.

"In that sense, choosing one building material over another is absolutely no guarantee that a house will survive a bushfire, but certainly the use of non-combustible products improves the likelihood." ■

James Hardie

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Scyon

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