

# fight fire with fire

Bushfires threaten lives and cause widespread property damage each year, but thoughtful design and building products can help to protect homes.

**T**he CSIRO has invested in bushfire research for more than 40 years, including the impact of climate change on bushfire risk, and predicts many regions will see a significant increase in the highest levels of fire danger in the year ahead.

With the frequency and severity of fire weather increasing in recent decades, it's more important than ever to understand the best approach to building in bushfire prone areas and the building products designed specifically for bushfire conditions.

Building in bushfire prone areas present numerous challenges, namely how to seamlessly integrate measures for people to live with bushfires while maintaining individual lifestyle choices.

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Dr Ian Weir, research architect for the landscape architecture department at the Queensland University of Technology, has around 15 years' experience in design and planning to mitigate bushfire risk. He says good design is about cross-purposing – achieving more with less.

'What designers should be looking for here are opportunities to integrate the otherwise disparate aspects of topography, thermal mass, radiant heat protection, insect control, flame contact,



Photo courtesy EXFIRE

thermal comfort, sun shading, site access and escape into one holistic design,' Ian says.

'One very practical example of this design approach is to eliminate veranda overhangs and eaves – which are proven weak links in bushfires – and replace these with perforated metal retractable shutters over windows.

'These shutters then control the sun, insects, glare and wind as well as embers and radiant heat. Our research has found that this delivers a significant cost saving, but importantly, the bushfire risk mitigation device is used on a daily basis rather than once in an emergency. That is, it is integrated into the daily life of the home – it is not a rarely used add-on.'

Some of the many areas of a building that can fail under bushfire attack include cladding, windows and glazing, decking or fences.

The fire-resistant coating FIRESHELL F1E from Australian-

*Above: Treated pine decking subfloor coated in FIRESHELL F1E (grey) for BAL29 compliance.*

based company EXFIRE provides a range of solutions for using pine and other softwoods in bushfire zones to comply with the bushfire resisting timber requirements of Australian Standards AS3959. Since its release in 2015 it has set the benchmark for exterior grade fire-rated coatings for timber.

FIRESHELL F1E has a market-leading one part water based system that meets the accelerated weathering and fire performance requirements of AS3959 for exposed exterior timber applications. The system is a high performance exterior coating in its own right, which is not only self-priming and highly flexible, but designed to comfortably handle harsh Australian weather conditions.

Setting a high standard for self-priming exterior fire-rated coatings for

timber, FIRESHELL F1E meets the accelerated weathering requirements set out in AS3959 allowing it to be used on external timbers for the requirements of the following bushfire attack levels (BAL): BAL 12.5, BAL 19 and BAL 29. The system allows non-compliant timbers to be coated easily onsite either pre- or post-construction and is highly suited for a number of areas around the home, including decking and pergola sub structures, base boards, facades, fences and retaining walls or any non-compliant timber that is required to comply with bushfire resisting timber requirements.

FIRESHELL F1E's performance on pine offers a sustainable alternative to using hardwood or steel for a range of building applications in bushfire zones.

EXFIRE says it has an experienced technical support team who have a wealth of knowledge and understanding regarding the Building Code of Australia's requirements. All NATA-accredited CSIRO test reports and



specifications are available to certifying bodies on request with detailed support available throughout the process to assist with your build.

FIRESHELL F1E's robust exterior weathering capabilities and high levels of intumescent fire suppression performance have also seen the FIRESHELL F1E

system used on a range of risk reduction and asset protection solutions, including the Sydney Harbour Bridge, Australian defence bases, power poles and heritage applications.

*For more information visit [www.exfire.com.au](http://www.exfire.com.au) or call EXFIRE on 1800 684 001* 