

BUILDING CONNECTION

AUTUMN QUARTER MARCH 2010

Before and after

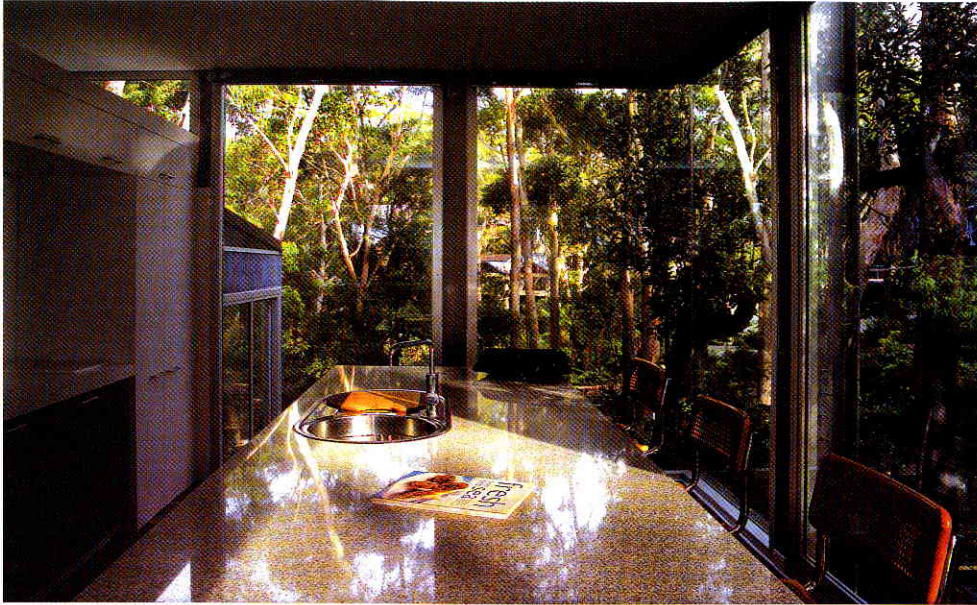
The emotional recovery from Black Saturday

Newcastle 20 years on

How natural disasters shape the building code



The solutions are out there



The process of manufacturing and certifying a single window to BAL-FZ requirements has proven to be extremely difficult. There are however a number of alternative window systems on the market for builders and designers to utilise. (Photo courtesy of Viridian)

Despite some industry conjecture, there are a number of products on the market to satisfy window requirements at Bushfire Attack Level Flame Zone. Jonathan Green investigates the difficulties in producing a single dedicated window system under the revised bushfire Standard.

The anniversary of the horrendous Black Saturday bushfires in Victoria has returned the nation's attention to building regulations and appropriate materials – with a particular focus on the revised Australian Standard *AS/NZ3959-2009: Construction of buildings in bushfire prone areas*.

The immediate adoption of the revised Standard in Victoria and the ACT was widely considered to be a

necessary and appropriate action to ensure all rebuilding efforts would be undertaken to the highest possible level. However, as a consequence, it did also put some manufacturers under considerable stress to get certified products and materials engineered and onto the market in such short time.

Under *AS/NZ3959-2009*, any sites for construction need to be assessed and defined by six Bushfire Attack Level (BAL) categories ranging from low to extreme. Once the BAL has been determined, specific construction requirements apply to the category. It is the extreme – or Flame Zone (FZ) – requirements that have caused the most difficulty for manufacturers under the time constraints.

Although most of these obstacles were rectified quickly, a number of isolated sectors were far more complicated. As reported in the last issue of *Building Connection*, roofing

systems for BAL-FZ were only released onto the market in the last quarter of 2009 – such is the difficulty in engineering and certifying relevant systems. It is worth noting that there are now a number of options in roofing for BAL-FZ on the market.

Another area that has received a lot of attention in the industry is the lack of a certified window for BAL-FZ. Although this statement is theoretically correct, there are a number of combined window system options that will meet all regulations. Moreover, it also does no justice to the manufacturers who have been working tirelessly to get a designated BAL-FZ window on the market.

“There are a number of manufacturers who are getting very involved with providing suitable window solutions for all classifications,” confirms Australian Window Association (AWA) marketing and technical manager Gary Smith.

“Technically there is no single window currently on the market that has been certified to BAL-FZ, but that does not mean there aren't solutions or other options on the market – or that there won't be one in the future.”

There is a huge amount of money required to undertake testing and certification, let alone the development and re-design costs of engineering the window system in the first place.

Although it is impossible to provide an exact figure, industry experts suggest that the total cost would run into the hundreds of thousands of dollars.

This leads to an obvious concern for any manufacturer: will there be enough of a market to justify the cost of developing and certifying an FZ window?

Anecdotally, less people are prepared to build in a BAL-FZ location – already reducing the size of the market available and dissuading a number of

smaller manufacturers who cannot justify the costs involved.

Furthermore, the Standard does also provide the option to use traditional windows and glazing provided they are covered with an approved shutter, and with the recent certification of a BAL-FZ window shutter from Melbourne manufacturer Paarhammer, many builders and consumers will see this as a simpler solution.

This is not to suggest that window manufacturers have not been trying to produce a dedicated BAL-FZ window. Many companies have done excellent work to achieve a certified window to BAL-40 (one category down from FZ) and are in the process of taking the next step or providing alternative solutions.

As well as providing the first certified bushfire shutter, Paarhammer has also achieved a dedicated window certification to BAL-40. Equally, glazing giant Viridian has been certified to BAL-40 through its PyroGuard 40™ product; however, this is literally a glass product only and not a complete window.

Victorian based manufacturer, Miglas has also achieved the BAL-40 rating and went extremely close to achieving a full FZ rating in recent testing.

These BAL-40 certified windows are an excellent achievement and are also proving to be the stepping stone for FZ systems.

National manufacturer Trend Windows was one of the first companies to achieve a BAL-40 approved window and has used that in combination with a screen to achieve an FZ window system that is compliant to both AS/NZ3959-2009 and AS/NZ1530.8.2-2007.

Also available in doors, the Trend Xtreme® Flame Zone range has been assessed by the CSIRO and combines its approved BAL-40 window with Pyro-Protec® seals and glazing systems and standard 5mm or 6mm toughened glass with a WindowShield Fire Curtain.

This not only satisfies the requirements under the Standard, but is also an affordable option for builders and consumers to consider.

It will continue to be a difficult decision for manufacturers to decide whether they can justify the expense in engineering a dedicated and certified BAL-FZ window. It is important to remember however there are a number of alternatives on the market.

“The industry is definitely trying and there is a lot of money being spent – you might just need to look at a few different solutions to what you have been used to doing,” says Gary. ■

Australian Window Association
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