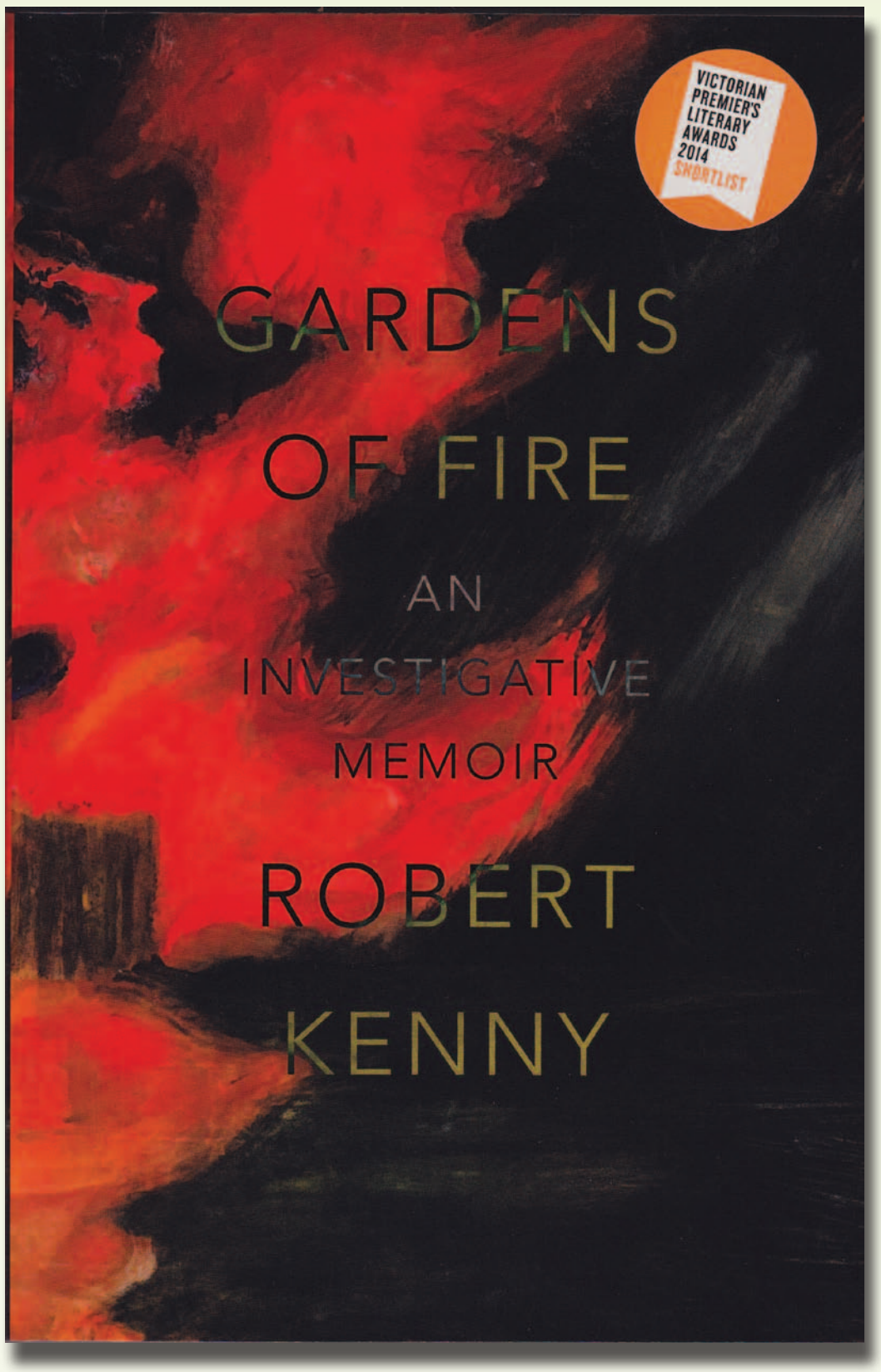
Bushfire Awareness Project

"Gardens of Fire" Display



The Rotary Club of Bridgetown is sponsoring a project to:

- raise awareness of bushfires, and
- how householders can act and work together to improve their safety ahead of bushfire attacks.

The project aims to:

- distribute copies of the book, "Gardens of Fire" to 16 libraries in the South West;
- have a complementary display in several SW Libraries showing steps that residents can take to ensure their houses and gardens are at less of a risk when a bushfire strikes.

The book is an account of surviving Black Saturday in Victoria, though his home was destroyed. There is hope and lessons to be learnt about why it is worth trying to save your house from burning.

The book is published by UWA Press and is sold from: uwap.uwa.edu.au/products/

From the Sydney Review of Books, a review of this book by Kristin Otto, entitled A Perfect Pyre

Gardens of Fire has been published by the University of Western Australia Press, a small firm on the other side of the continent from Redesdale. Other publishers may have believed there was no return in the market for yet another fire book, particularly one by an author with no media profile that does not contain descriptions of great heroism or personalised fatalities, and does contain a fair bit of intellectual content. Yet *Gardens of Fire* is a valuable book because Kenny was there. He went through the whole process of destruction and rebuilding, bearing witness – as a fine writer – to the struggle of his life. Such an account is rare.

The material in this display has been compiled by Peta Townsing. The views expressed are mine.

Research has been triggered by several close encounters with bushfires, the first when I was ten years old, when I witnessed the Scaddan Pine Plantation in Perth burn.

Fire came close in Bridgetown in December 2003 when we thought we might have to help our neighbours and fellow Rotarian, Ian Markey, and his wife, Mary, evacuate.

If we can reduce the risk for householders by education and by *encouragement to act* then we may lessen the destruction and the heartache of bushfire attack.

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PO Box 235, Bridgetown WA 6255

Gardens of Fire

How people living in fire-prone areas can make their homes and neighbourhood safer from bushfire attack.

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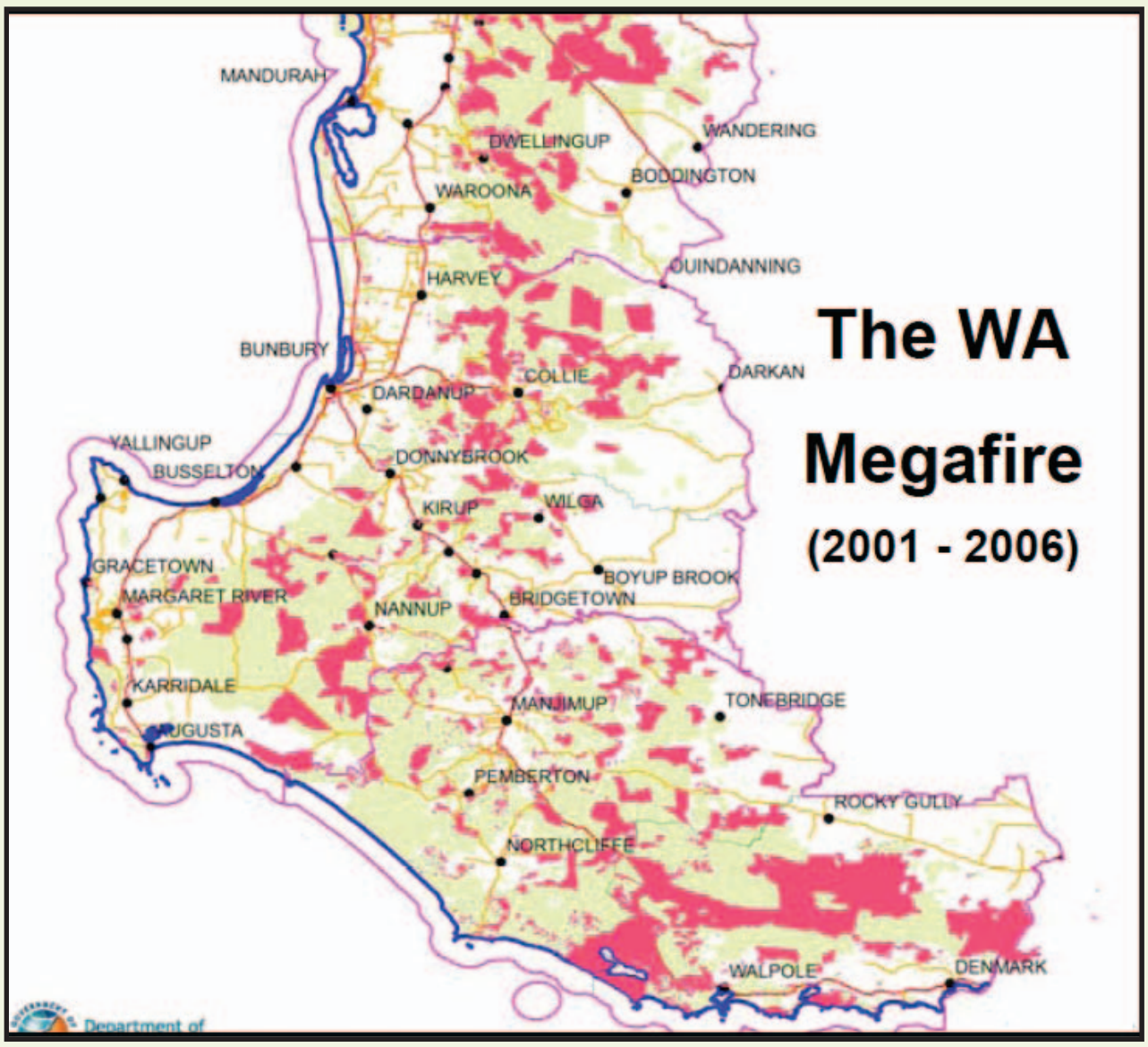
Are bushfires a risk in the SW?



Map of major bushfires

The map is by Phil Cheney (a well-regarded fire researcher) who has worked in WA.

It shows in red the areas burnt by large fires over a five-year period. Adding recent fires would increase the amount of red.

If fires have occurred in an area then they are likely to recur.

Thus most us living in the SW are in fire-prone areas and need to expect bushfires.

Recent bushfires

Since 2006 major fires include:

- 2009 fires at Bridgetown, Balingup and
- 2011 fires at Margaret River and Nannup.

North of the map bushfires have occurred at:

- Toodyay, Kelmscott/Roleystone and Parkerville/Stoneville/Mundaring.

The bushfire (R) came within eight kms of Balingup and Greenbushes and destroyed:

- historic Southampton Homestead
- Southampton Bridge across the Blackwood River.

Recent prescribed burns helped minimize damage.

Blackwood 61 Fire to the south of Balingup on 13 February, 2013.

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Learning about bushfire risk

Aftermath of a Bushfire.

Left and Below.

An excursion organised by the Festival of Country Gardens looks at areas near the fireground of the Blackwood 061 Fire in May 2013.

Above, a DPaW officer points out the differences between a forest burnt many years ago to the left of the picture and, on the right, forest burnt within the past two years.
Southhampton Rd, Balingup.

Right, a mosaic of prescribed burns over the past ten years was effective in reducing fuel load and the intensity of the Blackwood 061 Fire.

The Predictive map shows ages of these burns and was used to manage the bushfire.

Thus it was able to be contained more quickly and easily with damage to property minimized.

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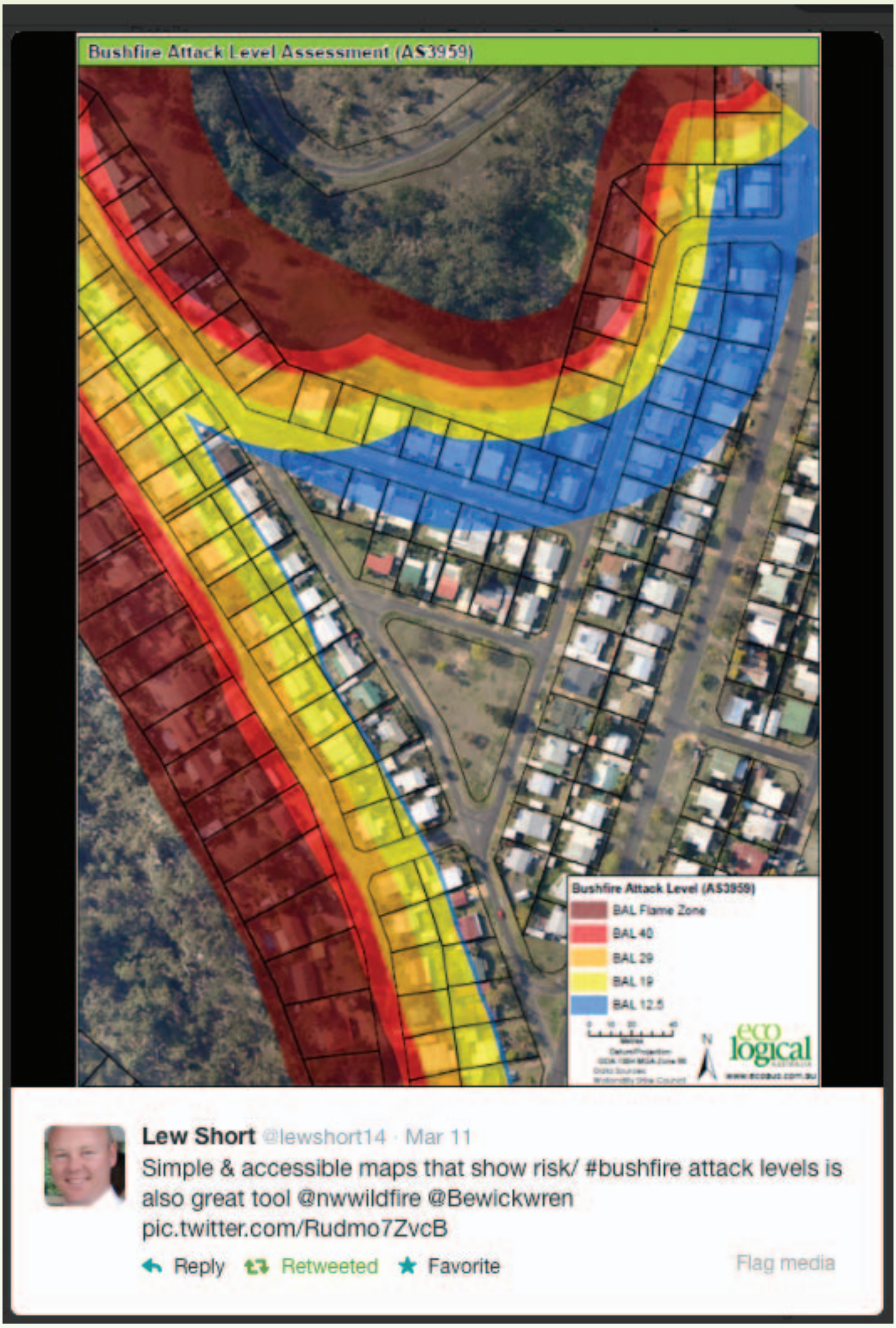
Predicting risk to homes



The above graphic is taken from Twitter and is an example of using social media as an additional tool to learn about issues, such as bushfire safety. Both DFES and DPaW send out Alerts via Twitter, an essential fire season tool.

Peta Townsing is a member of the group, Firewise WA. *@FirewiseWA*

Bushfire Attack Level assessments

The Bushfire Attack Level (BAL) is used by authorities to quantify the bushfire hazard so that safety standards are met in new developments.

It is not intended to be applied to existing houses though it can be useful.

The BAL depends on:

- vegetation type,
- the distance of the forest/ woodland, etc from the dwellings and
- the average slope.

A house on a flat block, 100 m from low open shrubland would have a lower risk than one 20 m from a forest below it on a 10 deg. slope.

The latter would rate in the Flame Zone; may not get permission to build.

Houses within 100 m of forest, or grasslands are said to be at the Rural Urban Interface or RUI.

The RUI often attracts treechangers.

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Retrofitting houses to lower fire risk

Good News

We can take positive steps to reduce our risk of bushfire attack.

One of the principal means of houses catching alight is through embers entering through vents, gaps between roofing and walls and from under-neath if on stumps.

The embers set debris alight in the roof space or under the house.

The embers can come from 5 km away in the case of high intensity fires or even further.

Radiation and direct flame attack also can set houses on fire.

Garden design makes a difference.

This article from 1951 is still relevant and provides evidence to support houses being fitted with wire mesh or similar to block embers from entering.

The Sydney Morning Herald (NSW : 1842 - 1954) (about) ◀ Saturday 8 December 1951 ▶ ◀ Pag

Why Some Houses Are Vulnerable To Bushfire

A FEW years ago, G. J. Barrow, an officer of the C.S.I.R.O., made an important discovery while investigating the disastrous bushfire which swept through the bayside resort of Beaumaris, Victoria, on January 14, 1944, and destroyed 66 homes.

He found that, with few exceptions, every house ignited inside and burnt from the inside out.

It was not the flames licking the outside walls that set a home alight. This was done by burning debris that gained admittance into the space between the ceiling and roof, into the rooms through open windows, or under the floor.

Beaumaris provided an excellent if unplanned laboratory for studying how a bushfire may devour a home.

The area in which the fire occurred was only 1,500 acres and contained 208 houses. The main fire area was covered with a dense growth of tea-tree scrub.

In an attempt to retain the area in its natural state, most residents had allowed their properties to become thickly wooded with native trees and shrubs.

The fire did not discriminate between brick, timber, or fibro-cement houses.

Brick homes were no more fire-resistant than timber ones, in spite of the fact that brick, brick veneer and concrete houses were mostly more favourably located in that they were generally surrounded by well-kept gardens, which tended to lessen the severity of the fire's onslaught.

Some brick houses were com-

By A SPECIAL CORRESPONDENT

pletely gutted. On the other hand, some timber houses escaped damage, even when branches of burning tea-trees were almost touching the walls.

Homes which resisted ignition were those into which the burning debris could not gain admittance.

Open windows and doors were an open invitation to the fire, whereas flyscreens and flydoors gave excellent protection. Even half-inch bird netting, used to exclude birds and opossums from the ceilings, was valuable.

Wall ventilators, louvre openings, and underfloor air vents were pathways for the fire unless fitted with wire screens.

Houses with eaves boxed with fibro-cement sheets or completely boarded were less inflammable than those with eaves left open for ventilation. Badly fitting tiled roofs admitted sparks.

Most of the fires were reported to have started in the roof. Several fires became uncontrollable because shingles on the gable ends of buildings ignited and draught swept the flames into the roof through large roof ventilators.

Even corrugated iron roofs were not completely safe.

In some instances it appeared that burning debris alighted in the guttering and ignited the dried rubbish, which was then swept up under the corrugations into the ceiling.

A scalloped facia board fitting tightly into the corrugations gave good protection.

According to Mr. Barrow, the chances of a house surviving a Beaumaris-type bushfire are determined more by the nature of the surroundings and the details of construction than by the materials used.

One cannot help wondering whether the building regulation which insists on ventilators in walls should be enforced in the country.

There is a good case for the incorporation of Mr. Barrow's recommendations for fire prevention in rural home-building regulations. He summarised his conclusions thus:

- In timber homes, the walls below floor level should be close boarded, ventilation being provided by woven wire vents.
- All vents should be of the woven wire type or else covered by a fine mesh.
- Large ventilators in gable ends should be eliminated and replaced by a number of scattered small ventilators with fine mesh openings.
- Eaves should preferably be completely boxed, but if left open should be covered by fine-mesh wire netting.
- Badly fitting tiles are a source of danger.
- The space under the corrugations of corrugated roofing should be closed at the eaves, ridges, hips, and valleys.
- Fly-wire window screens and doors are beneficial.
- Trees and shrubs should be kept clear of the walls.
- Stacks of fuel should be well clear of the walls or stored in properly constructed sheds.

And it is worth remembering that at least some protection can be gained when a bushfire threatens one's home by remembering to shut the windows and doors.

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Beyond the house: the surrounds

Design or redesign your garden/yard for low flammability

Living in fire-prone areas may require looking at your garden in a new way.

It is worth taking a leaf out of the old homestead gardens. They are an oasis, a plot of green amongst sunburnt paddocks - cleared of bush near the house and, beyond the fence, pasture heavily grazed over summer.

In the garden are trees for shade, often deciduous, and lawn if water permits.

Brackenhurst is a fine example of a homestead garden, with deciduous trees and lawn. The property survived the 2009 Bridgetown fires, due at least in part, to its design.

In the building of the new timber deck (ouch) the Bookleaf Cypress was carefully protected, but it is a highly flammable shrub, now gone.

Many evergreen shrubs need to be assessed as to whether they are too flammable to be safe in fire-prone areas. Artemisia and cistus are being removed and taken to the green waste site.

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Role of trees in fire-prone areas

Lallawoon on the Balingup/ Nannup Rd, six months after the February 2009 fire.

A grass fire, ignited by a Western Power pole in an ungrazed pine plantation opposite, swept to and then along the sides of this property. The cypresses show signs of scorching up to 60 m inside the property.

Taken two years later, rows of poplars on the side boundary of the property have only suffered a few dead branches from the scorching. In conjunction with the mineral earth firebreak they effectively diverted the flames away from the rest of the garden and the house.

Deciduous trees with their moist leaves and no volatile oils act as screens against embers and a shield from radiant heat or flames.

They will not feed the fire, though they can scorch. Plant trees such as poplars and plane trees near the house for summer shade and winter sun as well as for protection against bushfire attack.

The Building Protection Zone radiates out at least 20 m from the house and needs to be kept free of anything that is likely to burn. It is kept open for fire fighting, and to ensure there is no burning material close to the house.

Wide paths and paved areas will not burn. Shrubs are best kept low to avoid the 'ladder effect'. Lawns work well; if water is limited have more paving and less lawn.

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