

Evidence in ashes

May 28 2012, By Martyn Pearce



Lake Mountain following the Black Saturday bushfires. Photo by Andrew Kneebone, Flickr

The devastation of Black Saturday bushfires gave researchers an unparalleled opportunity to come up with bushfire answers.

The numbers that belong to [Black Saturday](#) are extraordinary, and horribly sobering. 173 people killed, more than 400 injured – many seriously. More than 2,000 homes lost, 400 individual fires, 78 towns affected, more than 7,000 people displaced. The unprecedented and severe fires began on a day where temperatures were in the mid-40s and were fanned by wind gusts reaching 90km an hour. They left a scar on the landscape of more than one million acres of the country.

But hidden within the numbers and the sheer horror of the day's events, is hope. Hope for answers. Because while the scale of the fires was

unprecedented, they also provided an unprecedented opportunity for quality research.

Some of that research has been conducted by a team of 10 scientists, including Dr Phil Gibbons and Dr Geoff Cary from the Fenner School of Environment and Society at ANU.

The research team looked at 12,000 measurements from 500 houses affected by the Black Saturday fires. It was a sample size which had never been achieved before in bushfire research.

“More than any other major wildfire in Australia, Black Saturday provided an unprecedented opportunity to learn about the effects of land management on house loss,” says Gibbons.

Perhaps unsurprisingly, what they found suggested there was no simple solution. But they did find that one solution helped more than most.

“Clearing trees and shrubs within 40 metres of houses was the most effective form of fuel reduction,” says Gibbons.

“This type of clearing was twice as effective as [prescribed burning](#) on Black Saturday.”

Their conclusion is controversial. In the immediate aftermath of the fires, and the 2009 Victorian Bushfires Royal Commission that followed it, one of the key issues was the effectiveness or otherwise of prescribed burning.

“Prescribed burning alone will not protect your house from fire – that’s an important thing for everyone to realise.

“We found that the proximity of prescribed burning was far more

important than the amount of prescribed burning within the landscape,” says Gibbons.

“The recommendations of the Royal Commission focus on increasing the area of prescribed burning rather than where it should be conducted,” adds Cary. “But our research indicated that the proximity of prescribed burning to houses was more important than the total area of prescribed burning in the landscape.”

But the surprises didn’t stop there. The researchers also found that certain types of clearing around houses were more effective protection than others.

“Interestingly, there was less risk to houses from vegetation in planted gardens compared with vegetation in remnant native bushland, probably because a well-tended garden lacks the fine fuels like litter, sticks and a thick shrub layer that elevates fire into the canopy,” says Gibbons.

“However, intensive management of native vegetation will not always be acceptable for environmental reasons and can’t guarantee protection to houses during severe bushfires,” adds Gibbons.

The answer, according to the researchers, lies in a wide range of responses, some of which may prove difficult or unpalatable – such as rethinking where properties are built.

“Residents need to be aware of a range of strategies for dealing with bushfires,” says Cary.

“Other approaches, such as tighter building codes for houses, or appropriate land planning which prevents the building of houses in fire-prone landscapes, or at least maximises the separation between houses and vegetation, should be part of any strategy to mitigate impacts from bushfires.

“However, the safest way to manage risk from bushfires – and the one that should be at the forefront of people’s minds – is leaving well before the fire arrives.”

Gibbons says that the lessons have come at a terrible price, but they are lessons we must learn – particularly as the future promises increasing bushfire danger.

“Despite having Elvis helicopters, satellite imagery and more fire fighters, the impacts of [bushfires](#) are increasing because our population density is increasing.

“The predictions of climate change are that we’re going to have more days of extreme fire danger in the future. That means, more than anything, we have to learn from tragedies like Black Saturday, and continue to learn.”

Provided by Australian National University

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