



Triggers to take action

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Plenty Valley FM News

Good afternoon. It's five o'clock, Bill McGillivray reporting. Today has been declared a day of total fire ban for the state. No fires may be lit in the open air and the CFA advises people living in areas at risk of fire activate their bushfire plan. The Covid-19 situation has declined in Victoria and New South Wales with 85% of the population now being double vaccinated. We have a new report that a fire has started in the outer north of Melbourne in Cottles Bridge. More information will be broadcast as it comes to hand. This is Plenty Valley FM independent news report.

Plenty Valley FM weather. The temperature is currently sitting at 35 degrees the wind is gusting at 45km/hr from the northwest with the relative humidity showing 14. Forest fire index is now rating at 64 and the fire rating is Severe.

Loud emergency alarm rings Attention! A bushfire warning is issued for the Cottles Bridge area. This emergency warning is for Panton Hill. There is a fire travelling from Cottles Bridge in a south-easterly direction towards Panton Hill. The fire is threatening homes and lives, you are in danger and need to act immediately. I repeat you are in danger and need to act immediately. Your safest option is to take shelter indoors now. It is too late to leave. What should you do? You and those in your household should move indoors immediately.

Chloe Begg

We've heard a presentation from Raphaelle which provided us with a really interesting overview of where people sheltered and why, and what the outcomes were. And now you've heard a very affecting mock warning asking you to shelter indoors.

Before we start the panel discussion we're going to run a short poll. And this poll asks you to imagine that you are at home and you have received the warning that we just heard. You are in imminent danger and you need to take action now. You will be impacted. What is your response to this message? Will you shelter in your car, travel to a safer building or a house nearby, shelter in a swimming pool or dam, prepare to shelter in your house, activate your fire plan for this circumstance, or prepare to shelter in your bunker? We will discuss these results shortly.

So we'll talk a little bit about some of these options during the panel discussion. But the first thing that pops out to me is the importance of having a plan. Although leaving on the day before or early in the morning of an FDR of Severe, Extreme or Code Red is the safest option we also understand from the research presented by Raphaelle and research conducted by the CFA is that people will find themselves in situations where they can't leave early or they will wait and see. They will also plan to stay and defend. So it's important because of the dynamic nature of fires there are many reasons why we might not be able to evacuate in a timely manner. We'll find ourselves having to shelter in place. So it's important that not just people who plan to stay and defend have a plan to shelter or a backup plan. It's also really important that people who plan to leave early have thought through what they might do if they find themselves in this unfortunate situation. So to start the

discussion Kat what can your research tell us about the experience of those who plan to leave but couldn't or people who wait and see?

Katharine Haynes

Our research has found that sheltering during bushfires is actually quite common. And after Black Saturday we surveyed 1300 households and conducted more than 600 in-depth interviews with people who'd been affected by the fires. And we found that sheltering experiences were quite common with around 50% having some sort of sheltering experience, and this ranged from short-term periodic sheltering as part of their property defence, through to longer term sheltering when property defence or leaving was no longer tenable.

And a lot of research has found that many people wait and see before deciding what to do which can lead to last minute evacuations or sheltering at an unprepared property. Researchers have tended to term this as indecision or decision making delay or not having a clear plan.

But more recent research explains this in terms of people needing to confirm that they're really threatened. They want to reduce any uncertainty involved with their actions. They want to know if the effort of evacuating is really worth it. And this is why many people leave late because it takes time to confirm the threat or warning, observing the fire, talking to others, and gathering additional information. In rapid onset fires like Black Saturday, or in some situations like Tathra in 2018 in New South Wales, many people didn't receive an official warning. People are caught at properties that we're not prepared to defend, and evacuation routes are already cut off. This means that many people have to take shelter at their home or property or at a nearby community building or space, and they're not prepared to shelter.

Chloe Begg

Thank you Kat. And Raphaelae what about your research? Can tell us a little bit more about that need for contingency planning or backup plans.

Raphaelae Blanchi

I think that what Kat just mentioned and the story of Malcolm as well, a lot of things can go wrong in a bushfire, and usually they do. Even if you have decided to stay and you are well prepared you might run out of water, there is no electricity, the pump's failing, there is no way to communicate to other people, and people might find themselves threatened by the bushfire. So it's why it's so important to think about the eventuality and consider the different places where you could protect yourself from the effect of the fire. But it's not only one place.

In some of our research, we found that some of the residents had to seek shelter in multiple locations to a maximum of three shelter locations. So, we found out that around 84% of the people have survived in their first location of shelter and it was often the residential building. But out of all of that 12% have to move to a second location because the first one has failed. And that was usually moving maybe to a car or moving to open space or water body. And out of that 2% of the population have to move to a third location because the first one failed, the second one failed, and they have to find a place of shelter again.

So, it really highlights the importance of having different options and having a backup plan.

Chloe Begg

Thank you. Kat, what are some of the challenges that people might face when sheltering in their house or in their garden?

Katharine Haynes

What research into numerous fires including Black Saturday, the 2018 Reedy Swamp Tathra Fires, and the more recent 2019-20 Black Summer fires is that many people don't anticipate that they'll need to take shelter and are not adequately prepared. And as Raphaele has talked about, the burning houses, the surrounding objects, they release potentially toxic chemicals into the air, resulting in increased short and long term health risks for people in the vicinity of the fire. And interviewees notice difficulty breathing and, in some cases, acrid or toxic smoke. Some even describe being strongly affected that they almost passed out.

People talked about the impact of this on their decision making and also how the exhaustion and dehydration in the heat of the day and exertions in the days and weeks before the fires contributed to poor judgment and unsafe behaviours and accidents, appropriate clothing and footwear was also an issue resulting in burns for some residents. And according to the coronial reports, contributed to deaths in some cases. And as this quote from Black Saturday well exemplifies from someone who describes the run from their house to their car. *'Well, in the run from the house to the car, I had taken my gloves off by then. So in the space of, I don't know, about 10 steps, that was enough for me to get burns on the back of my hand on the side that was facing the embers and the radiant heat'.*

People also mentioned their smoke alarms as causing significant additional noise and stress, and one respondent talked about having knocked them all off the ceiling and put them in the freezer so they couldn't hear them. Many residents were surprised by the lack of visibility when the fire arrived, and they describe how suddenly everything goes dark. And this includes in the house too. How there is almost zero visibility because of the smoke. So, they can't breathe, they can't see, and it's very hot and it's very noisy. And this quote from Black Saturday really exemplifies how bad visibility is. It's from a resident who got lost in their own garden and couldn't get back to their house, so they had to shelter behind a wall. *'I don't really know where I was because it was pitch black. And it was just so incredibly ferocious. But I found a wall, so I crouched down and sat through it. I had to, I had nowhere to go. I had nowhere to go. I didn't, you couldn't get your bearings. Someone said to me, 'You should have gone inside. 'But I couldn't go inside, because I didn't know where I was. I couldn't have possibly got inside'.*

So I think that really exemplifies that even when people are prepared to shelter and have a location in mind, they may not actually be able to even get there. Even if they know their property well and they could even be in their own garden. And I wanted to read this final quote from someone who sheltered in a bunker on their property during Black Saturday. It was a converted shipping container that had been dug into the side of a hill.

'What was the experience like being in the bunker? Picture the worst possible scenario you can picture and that's virtually what it was. It was like a jet engine at the door, you couldn't see in there. The smoke was pretty intense in the container. You didn't have a clue what was going on around you outside, it was one of the scariest experiences I have ever been in and I wouldn't like anyone to go through it'.

The experiences of sheltering are extremely stressful for many residents we've interviewed with high levels of fear and anxiety. There's a perception I think that sheltering perhaps might be an easy option, and the reality is that it can be really traumatic. So I think we need to better communicate the realities of sheltering.

Chloe Begg

Yes absolutely. Did you have anything else to add there Raphaele about the exposure and things you mentioned active sheltering? Is there anything else that you could give specific examples from your research there?

Raphaelle Blanche

Maybe a summary. After the warning we just heard it's too late to evacuate and shelter. That means the fire is close and it's almost arriving so there is a lot of embers and strong wind, and people might need to shelter in the house to protect themselves for 15 minutes, the time the fire front passes, but up to an hour. And that really depends on the circumstances and weather conditions but also the fuel that are around the property that might catch fire. So when we think also about Black Saturday conditions that provide an additional context where it really might be dangerous to be outside with damaging winds and possibility of falling trees and falling branches. And this damaging wind can also weaken the structure and overall during those conditions structures are a higher chance of failure. So it's why it's really important to keep actively monitoring.

In most cases residents would take shelter inside the house during the passage of the fire fronts and then return outside to defend their property. But it's really critical and I'll try to emphasize that again to monitor the fire progress in the immediate surroundings. Regularly patrol the exterior and the interior of the house to check the fire ignition. And that really will help you to assess when it's safe to leave the shelter. Protect yourself and then leave the shelter, go out and start to extinguish any other ignition on your property.

Chloe Begg

But what happens if your house is no longer tenable? Or the garden? Or if you're not at home when you receive a warning? What are some of the factors that people should take into account?

Raphaelle Blanche

Ideally it's just thinking about what are the other considerations at the time. Like you're not probably in the ideal situation, you're not close to your house, or the house has already failed. Think about how to use something around you without putting yourself at risk. It's working with something proximal or getting somewhere else which in the process of getting someone else might be more dangerous like in the research a lot of people mentioned that the difficulties to getting to the place due to the poor visibility and burning obstacles and other issues that can happen. So for example sheltering in a car gives you protections from radiant heat and smoke and as the last resort trying to shelter in open space outside or in a water body.

I think it's important to consider how you protect yourself from the effect of the fire. Again radiant heat and smoke. Think about barrier between you and anything that is burning. For example, the soil in burnt area is really hot. It's why I think it's important to think about clothing and shoes, like Kat mentioned and some of the research as well. Thongs and barefoot are not a good idea at all. Other people mentioned sheltering behind a physical barrier to protect themselves. Like, behind the water tank, behind the house, behind the shed, cars or tractors while they're outside. That just provides a little bit of respite from the heat at some point.

Sheltering in a water body that's another story. People have mentioned that they needed to be close to the house, so they are able to get there. But not also too close to the house because they can be affected by burning objects. For example we had a case in 2009 bushfire where some of the family was sheltering in the pool just in front of their house and everything was okay. The fire front passed and they survived in the pool. And then one of the persons tried to save the house and the house caught on fire and the house were burning really strongly. All the house was on fire. And that's when it became very difficult for them because the amount of flame and heat that they were receiving in the pool just in front of the house burning was something they mentioned was really difficult for them.

So there is something to think about. Even if you are in a water body some of your body obviously is protected but your head is still not. You still have to breathe. So thinking about again a barrier, like a woollen blanket that can be something that can be used to protect yourself. But you also have to think how it could be difficult in the water body if you are with young kids, pets, to survive. And the issue is drowning in the water as well.

Chloe Begg

What about your research Kat? What have you found about that situation of trying to get to another place trying to find another option for shelter?

Katharine Haynes

There are so many stories from our research of people who left their homes and searched for a safe place to shelter. And some have a location in mind: the neighbour's house, community centres - like a surf club or an area of open ground like an oval or a water body. Many people try and get to these locations in their cars or they end up sheltering in their car. They talk of incredible heat and smoke and traffic jams and car accidents and no parking and sheltering out in the open. So, the poor visibility and the difficulty breathing is a major issue. Let alone all the typical dangers from a bushfire. And the challenges of finding a safe place to shelter are really illustrated I think by this account of someone from Black Saturday who'd been attempting to defend when their house caught fire.

So he describes houses and trees alight as he left with another family member in his car, scraping his car underneath a fallen branch, and navigating himself along the road with almost zero visibility. And, as he says, 'bouncing off the gutters' And he said, *'I thought well, we'll go to the oval. All the trees at the oval were burning and the next thing we were at the school. So I'd miss the entrance to the oval because of the glare and disorientation and lack of visibility'* So he turned back for the oval, but then saw another family member's vehicle further up the road and again passed the oval. They attempted to return to the oval together but were prevented from doing so by a burning tree that had fallen on the road. They exited the cars and attempted to reach the oval by foot, but they couldn't and they ended up sheltering in a culvert next to the road.

During Black Summer thousands of people sheltered on South Coast beaches. There was difficulty parking, a lack of appropriate clothing and protective wear. There was no food there was no water. One resident described her experience of sheltering on the beach with her dog and I'll read her quote because I think it described the situation really well. *'So we turned around and we went to the beach. We actually found somewhere to park our car, but by this stage people were running and crying and yelling. Someone pushed my little boy over to get past, they were panicking. And on the beach, children were crying, mothers were crying, people were collapsing in the sand. I watched my whole street on fire. I stood there and thought I'd lost everything. There were so many little kids, and there were horses and goats and dogs. Every animal you can possibly imagine. We had a new rescue dog, and at that moment she decided to attack another dog and maul it to death on the beach. We were trying to pull her off this dog, and these dog's owners were screaming and everyone was screaming'*.

In the Reedy Swamp fire in Tathra in 2018 a resident we interviewed talked of how she took her elderly mother to shelter at the beach. The location they were in was too smoky and her mother had trouble breathing so had to be carried along the beach by strangers. It was incredibly windy and smoky and people had trouble breathing. They also got very cold and they had no food and water, and they were being lashed by the sand.

There are many formal and informal places where people will gather - beaches, ovals, sports clubs, fire sheds where conditions will be difficult and where people will have to deal with their own challenges. But they may also be exposed to traumatic things and the injuries and grief of others in group shelter environment. We also have to understand that isolation may be an issue, and it could be many hours before assistance can reach fire affected areas.

Chloe Begg

So considering everything we've just discussed what can people do to prepare themselves
Raphaela

Raphaela Blanche

I have maybe a short answer on this one. Preparation. Prepare for the unexpected even if you don't think that it's going to happen to you because you decided you're going to leave early and you're not going to be there. There is always a slight possibility that you might find yourself in a fire affected area. So prepare for the unexpected. Make a plan, have a lot of contingencies, backup plans. Understand the house its vulnerability and how you can protect yourself from the effect of the fire. But also understand the surrounding and the potential risk of things burning around your place, like exits and pathways and driveway. And practise. I think that's what is coming up from a lot of the other webinars. Practise, practise. It's an easy it's coming like natural for people if they are in this situation.

Chloe Begg

Do you have anything to add Kat?

Katharine Haynes

Our research on sheltering in Black Saturday that Raphaela and I were involved in it's the most comprehensive study of sheltering in bushfires to date. And I think it shows that despite a general lack of awareness and preparedness for sheltering when the fires threatened most people were able to shelter actively and safely and monitored what was happening and took actions to protect themselves and other people. And the research shows that people who had the best sheltering experiences had undertaken planning and preparation. Things like identifying those multiple places of shelter under different scenarios, identifying safe places to shelter inside the house, filling those baths and sinks with water. And I think also having games and thinking of distractions for kids as well.

Chloe Begg

Some really good points there. So I guess to summarize the panel the safest option is always to leave early. However it's not always possible and a critical aspect of bushfire safety is to have a backup plan. All plans can fail and it's impossible to predict all scenarios which is what makes it so difficult to be able to be prescriptive and to be able to give very detailed advice. So there are a range of options people should be aware of them. There are options that are provided by the state government and local governments such as the Neighbourhood Safer Places and the Bushfire Places of Last Resort or community refuges. But they're not available to everybody. And while these last resort options have been assessed to separate them from vegetation and to make sure there's some protection from excessive levels of radiant heat, your safety isn't guaranteed. And it should really be treated as a last resort.

Not all options provide the same amount or same degree of protection from bushfire and not all will be available in all circumstances. Personal circumstances and the local conditions of the fire, these affect the extent to which any sheltering option can provide safety including that ability to travel, a safe path to any of the options. So this means that we have to think about these different scenarios regardless of what your Plan A is to make sure that we've thought through your Plan B and our Plan C and D etc. And by doing so you'll be in a better place if you are finding yourself in that situation, that unfortunate situation, of having to shelter because planning and practising will enable you to have a better ability to cope and survive if you find yourself in this situation. Thank you.