Bushfire Resilience Inc. Webinar 3 2022, Panel Session

# Your last resort options

Chair: Malcolm Hackett OAM

Panel members: Dr Justin Leonard

Dr Jim McLennan

Dr Rob Gordon OAM

### Chair

Rohan could you show our poll question

We'll give people a little bit of time to have a think about this.

Despite all your best endeavours you are sheltering in your house, and it is ignited by a fire. What would be your most likely last resort survival action? You've got one choice.

We'll have a look at those results later.

Now I'd like to welcome Rob Gordon to join Jim and Justin for our panel discussion.

There's been a lot of talk about fear, anxiety and stress. What does it mean to people to prepare themselves for these last resort situations?

# **Rob Gordon**

I think Malcolm this is the key. I think your story's very helpful in that we have to understand, it's not just fear it's the state of arousal. Fear will produce arousal.

Arousal is the overall state of energy, emotional, physical, neurological that is an instinctive activation for us when we're under threat and we function completely differently in that state. And most people hopefully have never been in that state before, so, all of their usual methods of managing themselves are not going to apply to that unless they really think about it and build that into their preparation.

The state of anxiety is probably going to come first of all from threat. But its a threat with an imminent sense of injury or death. But even just in a very unusual dramatic unpredictable situation of fire you're going to be in a state of arousal anyway. And it's in that state that people have a very predictable effect of tunnel attention. I think your wife Malcolm illustrated that when she presumably tunnelled on to "I've got to get to the car" to the exclusion of the means of using the car which was the case in the bag. So that tunnelling is what drops out those elements and there are many stories of that sort of thing.

And the only way around that is to build protection into your plan by enacting the plan so that it's not stored as a series of mental memories which will be in words and ideas. "You need to do this and then that and then that" but is stored as a series of memories of actions. So you go through the process again and again until you can do it without thinking. Whether it's in the dark or the light or whatever, so that your body remembers just the way for instance you have a shower and brush your teeth in the morning, you do it without thinking.

That means you haven't prepared your plan unless you've rehearsed it so often and in varying conditions that you can do it without thinking. Otherwise you may be psychologically in the state that you described Malcolm where you had a wonderful plan but it was unable to be used for very simple reasons. And there are so many stories of that sort.

The only other thing I would add is I think it's so important to really brainstorm all the possible things that can go wrong including the fire behaving in a completely unpredicted way doing exactly the opposite to what all the fires in your area supposedly have done before, and that you consider how you would deal with that.



The more you can actually replace these unexpected crises with a predictable range of possibilities which you've already thought about then you're actually activating familiar mental patterns instead of having to improvise. When we're in high arousal, we will dither and what we come out with will be very unpredictable.

# Jim McLennan

From my viewpoint, the best way the [00:58:00] best method of preparation is practise.

### Chair

And certainly, this year's webinars and previous ones we've focused on this idea that you need to practise so you get your muscle memory in place in order to be able to do it.

But also you can find out the weaknesses. Practising with other people and then critically reviewing what you've done, what went wrong. I've got no doubt that that makes a huge difference.

Justin, the bunker descriptions that you gave that's some of the clearest that I've seen anywhere. It was terrific information, but not everyone's got a bunker. If you can't do some things what are other things are available to you? What's the hierarchy? Where should your head first?

# **Justin Leonard**

I guess if your house isn't going to provide tenability then what else can you get into that can fully enclose you and provide both that radiant heat protection and protection from the superheated air that Jim mentioned, and smoke.

So, something like a vehicle is a really obvious secondary option. And if that vehicle's parked in your garage so that you've got a very short path to get into it and then drive out and away from your burning structure that is a really ideal next hierarchy **[01:00:00]** down process.

Now that doesn't mean driving off into the yonder and trying to get far away, that means driving that vehicle to a short distance into an open area where you can utilize that vehicle to provide ongoing encapsulation. We're talking turning off the vents, windows up, the whole bit.

If you move down through hierarchies what else is next below that? Things like water bodies, you wouldn't think of them as enclosed protection but in a sense they are actually particularly good at achieving that similar goal. Now getting into a body of water protects you from superheated air and from the radiant heat except for what's above the water. **[01:01:00]** You can pull towels and clothing over the small amount of your body that's above the water and form a wet membrane. And that actually still protects from radiant heat, superheated air and smoke. And you can keep refreshing that membrane that's draped over your head by dunking under and rewetting. So, you've actually created an enclosure or an encapsulation that ticks all the boxes. So that's another particularly good thing. And it doesn't matter what that water body is, it can be a swimming pool or a dam or a river or the sea, they tick those boxes. But just be a bit careful about the relative proximity they are to very high fuel loads, you want to be away from structures and away from significant burning elements that are going to keep putting out strong toxic smoke. But water bodies that have decent distance from those things are particularly good.

If you don't have either of those then you really start looking for just geographical features you can hunker down behind that at least give you some protection from radiant heat and there might be a bit of air deflection and whatnot. But you're certainly not going to get smoke protection and things from those, and you're getting down to the PPE on you and what you can physically put between those and that's how you filter down. And just getting distance from both heavy and fine fuels.

# Chair

Jim the things Justin's been talking about and Rob supports, are there any particular things you'd want to emphasize?

#### Jim McLennan

I think that Justin's account of a hierarchy was very clear. Of course, in really bad situations, where something unexpected has happened that you haven't planned for it really is a case of trying to keep your head and just do the best you can with whatever's at hand, Repeating, get something between you and the source of radiant heat and superheated air but protect your airways as much as you can.

# **Rob Gordon**

Listening to Jim and Justin it becomes clear to me how having factual information allows you to make mental pictures of what would happen. I think what you described of being inside that structure as the humidity builds gives you a very vivid picture of how you move from the concept or the idea of being in a cool subterranean place to the actual sweaty hellhole it might end up being. And I just think probably many people have had difficulties because they've worked with their imagination. When our arousal goes up we tend to think in pictures rather than concepts. And if you've walked in under your house on a hot day and you feel how cool it is you might, in that narrowed focus, think I've now got to get in where it's cool without realizing say the floor is above it and it's going to ignite or whatever.

I think it's so important that people expose themselves to stories and images and the kinds of descriptions that we've had tonight that allow people to visualize, even your statistics about radiant heat Jim. I think when the skin starts burning you can start to visualize how terrible that would be. I think this really informs us what we should do.

# Chair

People who already have a bunker may not have tried it out for an hour, I mean if you're just having that experience with the family in a full bunker might make a huge difference to how you go through it in real life?

# Jim McLennan

I wonder what happens if you have the dog in there panting.

### Justin Leonard

Very much so. I try all the variations, anyone you know **[01:06:00]** that's considering that idea of a bunker well they're ideal candidates. Just "Hey well come and spend an hour in mine." That's exactly what should happen. And you should also go "Okay today is one of those days that you'd really consider up there in the temperature conditions the winds might not be there, but the temperature conditions are like what we might be getting into on a high fire danger day. Let's go and spend an hour in the bunker in that day." Keep mixing it up and trying all the different scenarios, push it for a bit longer, experience what all those things are. It's not dangerous to push the envelope a bit in that stuffy environment, it's good to know what you can really feel and put up with.

# Chair

Rob's point about people wanting to take animals in there too I guess is pretty important, because you can say I've got a four-person bunker and I'm taking three dogs in as well.