

Horses and bushfire – what do we know?

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Chair

Can I invite Kevin Tolhurst from the University of Melbourne to cover some issues for us when assessing a property. Thanks Kevin

Kevin Tolhurst

Thanks very much. I guess what we've heard so far is a lot of really useful information about horses.

What I'd like to indicate by looking at two separate properties in a relatively close proximity, just a couple of kilometres away from each other, how different the fire environment is that they might be subjected to. Here I've shown a property in Strathewen and another one in Arthurs Creek with some circles around at 5km and 10km. The fire on Black Saturday was travelling at more than 10km/h. So a fire 10km away will potentially be at your door in an hour, or much less if it's spotting. You need to look at a fairly broad area around your property to really understand the nature of the fire.

And here we've got forest for the Strathewen property for example to the west, north, east and south east and even to the south. Arthurs Creek has a bit more of an opening to it particularly going out to the metropolitan area. That's all important in terms of where the hazards might come from.

The Arthurs Creek property we see here, there's some forested area in fairly close proximity over here, that potentially could create a more severe fire, but even spotting coming from those fuels in the background could be quite significant.

The Strathewen area is surrounded by mountains and so the chance of this area being under severe conditions basically a drop zone for embers and effectively a firestorm for forming is of great significance.

So whilst this is in the valley often people think anything in the valley is a safer place than being on a ridge top like the other property was but under really severe conditions the reverse is almost true. So I guess if you want to make a comparison between the properties the hazards that we're looking at are heat, and that heat might be heat from a convective heat or radiative heat.

On the first property which is largely surrounded by grassland that heat may persist for up to an hour whereas in property two where it's more surrounded by forest area and you may expect more spot fires to form it could be for four hours or perhaps even more that you're subjected to potentially lethal heat because of the recurring fires in that area.

Talking about flames themselves which are obviously potentially lethal. In the grassland area it might be more like 10-15-minute exposure. And likewise in property two the flames might be of similar time. But as I said before the heat is quite different, the ember showers can be quite different, both embers hitting you but also starting fires. In property one it might be one to three hours. In property two could be up to eight hours.

Smoke is a major issue both in terms of breathing and visibility. Again property one the exposure might be for up to an hour, property two it might be for a couple of hours where you have smoke which is limiting your ability to move and to breathe in that area.

The wind that might be created. In property one we're going to be exposed to the ambient wind in property two potentially because of the fire storm activity you may end up with 20 minutes of cyclone-strength wind, so that has a big impact on what you do and how you go about it.

So some of the options you need to consider is leaving early as we've heard. Using barriers, refuge areas or shelters, that need to be well planned and thought out. And we've heard some great suggestions here tonight and we need to reduce perhaps the nature of those hazards by slashing, plowing, heavy grazing, or reducing fuels around the area. But all of that needs to be done months or even years before to make sure that you're in a good place.

So we're going to talk a lot more about this in Webinar 5 for anyone who's interested on 21 September. So we'll be dealing with bushfire risk in more detail. But this is just a little snapshot of how different two properties can be in close proximity to each other but because of their location in the terrain without even considering access and egress and issues about horses. But just understanding the nature of the fire that you might be exposed to and what you need to plan for.