Bushfire evacuation

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ABSTRACT

In presenting this paper the intent is to highlight the complexities associated with. bushfires impinging on communities co-existing with bushland, the implications for fire controllers and policing services when a decision is made to evacuate people from their homes and whether this action can be avoided.

INTRODUCTION

For the purpose of this paper clarification of terminology is important. Bushfires or wildfires are generally descriptions applied to any fire which consumes bush, bushland or native or plantation type vegetation. However what is of significance is the number of people who chose to live in a bushland environment. Co-incidentally a large percentage of people choosing this lifestyle also chose to keep pets or, in the case of a practicing farmer, keep stock for various reasons.

CONTRIBUTING FACTORS

By their very nature we have such fires during the summer months, when all of the vegetation and soils are extremely low in moisture. This same rule also applies to structures which are predominantly constructed of timber ie bridges, railway sleepers, culverts, power poles and telephone cable supports; not to mention the rural/urban property infrastructures such as dwelling houses, buildings, fences and the like. Suffice to say that when a large fire involves a large tract of countryside, the subsequent impact is multifactorial and complex, both during suppression and post suppression (recovery phase).

WHAT CAN WE EXPECT?

The priority in any emergency is the preservation of life and bushfire is no exception, that is, the decision is quite often made to protect human life. As a consequence in any larger fire involving rural areas (including the urban interface) the first affected lifelines are the power and telephone services. This is serious enough during the day, but has wider ramifications after nightfall, where the darkness and communication isolation can have serious ramifications for young and old alike.

For the record, the Swan Region has 4-5 significant fires per year which warrant evacuation (at various levels) and on average we 'lose' a fire fighter per year. There are enormous implications and support services required with losses at fires, for example 22 agencies were involved in the Wooroloo fire in 1997. How do we cope with such a large management structure, a running fire fight, people losing their homes, people confused, disoriented and not sure where their loved ones are, and indeed not able to access the fire ground to 'see for themselves', their property, including personal items and pets?

EVACUATION OR RE-LOCATION?

As evacuation has strong emotive connotations, the fire services has recently adopted the term re-location. This is a far more descriptive term which infers that you are not being forced out of your home, (and are not sure where you are going), but suggests that you are being relocated, temporarily, to a safer, more appropriate place.

'A safer, more appropriate place' - what does this really mean? Following the Ash Wednesday fires, McPharlane identified quite serious implications associated with the placing of people, particularly younger people, in the open air (ie using parks, football ovals etc as refuge areas).

In placing people in such environments they were subjected to all the impacts generated by the fire fight - heat, wind, smoke, ash, noise of aircraft, helicopters, water bombers, sirens and fire appliances - and as a consequence people suffered degrees of post traumatic stress disorders. The fire services of Western Australia have addressed this issue on a number of fronts, namely:

- stay in your own home;
- development of safe havens throughout the fire prone areas of the State.

Who has the authority to order an evacuation and implement an evacuation process?

The fire combat authorities, through the appointed Incident Controller, have the legal authority to request the re-location of persons threatened by the fire. The police services then have the task of implementing the relocation (often with the assistance of State Emergency Service personnel) of persons to a 'safe, appropriate area'. Should students of a primary school require relocation, it would be appropriate to transport them to another primary school for a number of reasons. These include getting them away from the physical and emotional aspects of the fire and subsequent fire fight, into an environment which is familiar to them and, most significantly, one where parents have 'one point' of contact, and can be assured the children are being catered for, out of harm's way.

FIGHT OR FLEE

One of the myths about bush fires is that the fire itself causes houses to combust instantaneously. Another myth is that people should take to their vehicles and escape the fire 'front'. There are clear indications in our data that some people were not sure about the way a bushfire 'works', ie they did not have information on the movements of a fire front, the way embers and sparks fly, or the way in which houses were likely to ignite. These people expected the fire to cause their homes to combust on impact. They had reason to panic because they lacked information on what was likely to happen. Our findings indicate that people who were prepared, that is, those who had prepared their homes prior to and on the day, as well as themselves, were relatively safer than those who fled onto the already overcrowded exit roads.

There are many lessons to be learnt for people who wish to live in harmony with their surroundings in a bush environment. People who had information on what to do, and were prepared to stay and fight the fire were definitely in a better position than those who did not know what to do - provided they had enough water with which to fight the fire.

There are definite indications from our research that it is safer to stay with your home if you are able and prepared to fight spot fires which are the real threat to homes in bush areas. However there are some qualifications. The house must be a 'safe' one, with many, if not all the following features:

- sealed ventilators, eaves, etc;
- building construction of non-flammable materials eg. brick;
- a single storey dwelling construction;
- a carefully laid out garden with defined spaces cleared near the house;
- the house should face away from a likely fire path;
- it should not have too many large windows; and
- there should be adequate water, which does not rely on electrically driven pumps to get it to the 'seat' of the fire.

There needs to be adequate communication of warnings where possible. In order to accomplish this communication channels need to be kept open before, during and after the fire.

Results from a detailed study of the bushfire on 16 February 1983, at Mount Macedon, Victoria, suggest that able bodied residents who are threatened by a bushfire should remain in their houses. Their chances of survival are excellent and ninety per cent can expect to save their houses.

Evacuation is a potentially more perilous alternative for residents and about 44% of those who flee might expect to lose their houses. However provision should be made to evacuate disabled or infirm persons and residents of houses that are surrounded by exceptionally high fuel loads.

There are many more details that are important, but research over two decades - and after Hobart in 1967, Gippsland in 1965 and Ash Wednesday 1983 - indicates that, if the occupants are not elderly, but of normal health and over twelve years old, then:

- the house is the safest refuge; and
- people who understand what can happen to them in a bushfire will not panic and will do all the right things.

Finally, if we put our mind to it by undertaking good fuel reduction in the large, dangerous areas around us (as well as our own house blocks), then we can minimise the impact of a future large fire. But, if we do not do so, such disasters will be repeated, time and time again.

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David Webster is currently the Manager of Swan Region, an area which surrounds Perth CBD and consists of 12 local governments authorities, 50 volunteer bushfire brigades and approximately 2,000 fire fighters. Due to the close proximity of Perth, the largest percentages of fire incidents are multi-agency and directly impinge on built up areas. David has been instrumental in developing and marketing the Incident Control System to responding combat agencies and is currently reviewing a centralised call dispatch and reporting system to enhance multi-agency responses. Although from a strong training and development background, David is currently studying emergency management and leadership at university level.