



Australasian Fire and Emergency
Service Authorities Council

BUSHFIRES AND COMMUNITY SAFETY

POSITION

Version 4.1

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Please note:

This paper expresses the Australasian Fire & Emergency Service Authorities Council's (AFAC's) position on the safety and protection of people and community assets during bushfires.

The paper includes principles for consistent application by member agencies in all Australian states and territories, subject to relevant local legislation and local refinement.

It is intended for use by fire, land management and emergency service personnel working on policy and programs at a senior level.

It is written for an audience with an assumed understanding of the issues discussed and should not be mistaken for a document providing guidance to the general public.

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1 Executive Summary

Bushfires are a natural part of the Australian environment and occur regularly, yet many people fail to prepare adequately for them. When threatened by bushfires, many people often leave it too late to make critical decisions and have few safe options.

Given the presence of bushfires in the Australian environment and peoples' vulnerability to them, this paper expresses the Australasian Fire & Emergency Service Authorities Council's (AFAC's) position on the safety and protection of people and community assets from bushfires.

This position is based on risk management principles, available evidence and experience, including the findings of a number of public enquiries and research. The position may change following further research into bushfires.

The position consists of the following elements:

1. The protection of people is always the highest priority (See section 5.1)
2. Fire agencies should give priority to informing and protecting people, and protecting the assets communities value (See section 5.2)
3. Firefighting resources will not always protect every property (See section 5.3)
4. Managing risk and reducing loss is a shared responsibility between government, communities and individuals (See section 5.4)
5. Sound policy and planning is essential for effective bushfire mitigation. (See section 5.5)
6. Fire agencies and their partners should implement a broad range of risk reduction measures. (See paragraph 5.6)
7. Fire agencies should engage with at-risk communities, and seek to influence their preparedness for bushfire (See section 5.7)
8. People in bushfire-prone areas should make their own decisions and preparations for how they will respond to the bushfire threat (See section 5.8)
9. People threatened by bushfires need ready access to accurate information and timely warnings to take effective action (See section 5.9)
10. People usually have two safe options when threatened by bushfire: leaving early or staying and defending adequately prepared properties. Leaving early is always the safest option (See section 5.10)
11. Many people fail to prepare adequately for bushfires, leave it too late to make critical decisions, and have few safe options. They are vulnerable and need direction (See section 5.11)
12. Vulnerable people who cannot cope with bushfire may need assistance to relocate well before fire impacts (See section 5.12)

13. Large scale evacuation is not the default option, although in some circumstances it may be the safest option (See section 5.13)
14. Incident controllers should seek information that will enable them to make decisions about whether or not to recommend evacuation (See section 5.14)
15. Last minute relocation or evacuation is dangerous (See section 5.15)
16. Road access must be carefully managed during fire events (See section 5.16)
17. Fire agencies can and should support community recovery (See section 5.17)

2 Introduction

This paper seeks to promote community safety in bushfires.

Bushfire cannot be eliminated from the Australian environment. Furthermore, climate change may bring longer bushfire seasons to parts of Australia, an increasing number of extreme fire weather days, and increasing fire intensity.

Unfortunately, many people fail to prepare adequately for bushfires, leave it too late to make critical decisions, and as a result have few safe options. Hence, engaging with communities, sharing responsibility with them and building their capacity to prepare for, respond to and recover from bushfires will be a critical component in reducing loss of life and reducing broader social, economic and environmental impacts of bushfires across Australia.

This paper expresses the Australasian Fire & Emergency Service Authorities Council's (AFAC's) position on the safety and protection of people and community assets from bushfires. The paper includes principles for consistent application by member agencies in all Australian states and territories, subject to relevant local legislation and local refinement.

The paper provides guidance on good practice for managing community safety in bushfires and increasing community resilience, and is supported by sub-papers that expand on key points.

This position is based on emergency risk management principles and available evidence and experience, including the findings of a number of public enquiries and research, and may change following further research into bushfires. Recently, the findings of the Victorian Bushfires Royal Commission have influenced this position.

Member agencies are encouraged to review and develop policy and practice that reflects this position.

3 Purpose

The purpose of this paper is to articulate a national position for fire agencies that provides the doctrine and describes good practice for creating and maintaining bushfire-safe communities, with the aim of minimising harm and loss from bushfire throughout Australia.

4 Context

4.1 *Bushfires are a common and normal occurrence*

Bushfire is a normal part of Australia's natural environment, particularly in eucalypt forests, and bushfires are a common occurrence during drier periods of the year in most places. The frequency and intensity of bushfires varies throughout the landscape under natural regimes. Various land uses and land management practices have modified, and continue to modify, natural fire regimes.

People living and working in or visiting bushfire-prone areas need to adapt to the risk posed by their environment, including changing fire regimes.

4.2 *Bushfires can cause death and injury to people and animals, and damage to property, the natural environment and other community assets*

Bushfires of low or moderate intensity often pose little threat to life and rarely cause significant damage to property. However, bushfires that burn in steep terrain or on hot, dry and windy days spread rapidly, crown in forested areas, produce powerful convective columns and create extensive forward spotting, often making their control impossible until weather conditions moderate. Such fires are dangerous events that cause significant damage to property and occasional loss of life.

As bushfire danger ratings approach 'extreme', bushfires are often described as 'firestorms' and become impossible to control. As bushfire danger ratings approach 'catastrophic', the risk of serious injury or death to people in the path of uncontrolled bushfires increases significantly, and many properties can become difficult or impossible to defend.

While fire is important to maintain many natural ecosystems, fire of inappropriate frequency and/or intensity can cause damage to these ecosystems. Inappropriate fire regimes are a threat to biodiversity, water catchments, air quality and landscape values. Both too much and too little fire can damage ecosystems.

4.3 *Losses can be reduced, not all will be saved*

Appropriately designed, constructed and prepared buildings can offer protection to people during most bushfires, reducing the likelihood of bushfire-related injury and death.

Property losses can be reduced if structures are designed, built and maintained to resist bushfire. Other measures such as appropriate siting and the management of bushfire fuels can significantly improve levels of protection to less fire-resistant structures.

Bushfire loss can be reduced or avoided in some cases, but cannot be entirely prevented. A balance needs to be struck between measures taken to reduce or avoid harm and loss due to bushfire, and the protection of other values.

This compromise involves acceptance of the inevitability of some loss. Governments can assist the community determine the level of risk it is prepared to accept. Fire agencies can inform governments and communities about these risks. The risk management approach adopted should be consistent with planning for other natural hazards.

5 Position

5.1 *The protection of people is always the highest priority*

In all cases, the protection of people should be the first and highest priority for fire agencies and others while controlling bushfires.

5.2 *Fire agencies should give priority to informing and protecting people, and protecting the assets communities value*

If a bushfire cannot be controlled, efforts should be directed to anticipating the bushfire's progress and safeguarding people threatened by it. Fire agencies should, subject to the availability of resources, focus on:

1. gathering and providing information and issuing warnings to enable those at risk to protect themselves;
2. protecting vulnerable people, in child care centres, schools, group homes, aged care facilities, hospitals, prisons, caravan parks and camping grounds, fire refuges and other places where vulnerable people gather; and if appropriate, recommending evacuation;
3. protecting assets the community has identified as valuable, and that will assist the community recover after the fire;
4. stopping building-to-building fire spread in built-up areas; and
5. protecting less valuable or more isolated assets.

5.3 Firefighting resources will not always protect every property

In most circumstances fire agencies will be able to provide sufficient firefighting resources to defend threatened properties when bushfires occur. However, there will be circumstances when agencies are unable to provide firefighting resources in sufficient time and strength to prevent all loss of life and damage to property.

Additionally, firefighting resources are likely to be allocated where they will be most effective at protecting lives, not necessarily where property losses are most likely. Firefighting resources are unlikely to be allocated to property that cannot be defended safely.

Hence fire agencies should encourage people planning to defend their properties to be self-sufficient. If people are unprepared or incapable of defending their property without assistance from firefighters they should plan to relocate early to a safe place well away from the fire's expected footprint.

5.4 Managing risk and reducing loss is a shared responsibility between government, communities and individuals

Fire agencies have statutory responsibility for controlling bushfires. Other agencies including police and emergency services also have an emergency management role.

Arrangements for emergency management planning vary. In some jurisdictions, a State/Territory agency may be designated to lead planning; in others, local government is responsible. In all cases, local government plays a critical role in developing local emergency response and recovery plans.

Arrangements between all agencies involved in planning for, responding to and assisting in recovery from bushfires should be developed to support community resilience in a consistent way.

Managers of public and private bushfire-prone lands adjacent to communities should manage bushfire fuels on those lands to moderate the effect of bushfire in accordance with fuel management plans. Similarly, road management authorities should manage roadside fuels to maintain safe access to and egress from bushfire-affected areas, as well as to protect other values.

People should be allowed and encouraged to take responsibility for their own preparedness and safety in bushfires. Fire agencies should support and assist them to manage and prepare for bushfire, and encourage people to understand fire and to take actions necessary for their own safety. People living in bushfire-prone areas should be encouraged to have appropriate insurance to cover the full replacement cost of assets.

The steps that people take to prepare for bushfires are crucial to the protection of lives and property. Fire agencies will provide support and assistance during bushfires when and where possible, but their effectiveness will be compromised if people or properties are not adequately prepared for bushfire.

Fire agencies' engagement with communities should foster a sense of partnership with and between residents and their neighbours, business owners, land managers, and government in terms of bushfire risk management and response. Fire agencies should encourage people to gain knowledge and skills to enable them to prepare themselves and their property to survive bushfire, and to help them identify the triggers for response when a bushfire threatens.

Collective action by people preparing for and responding to bushfires will invariably achieve better results than individuals acting alone. Fire agencies should support initiatives that encourage and assist members of communities to act together in support of fire management efforts.

5.5 Sound policy and planning is essential for effective bushfire mitigation

Appropriate bushfire safety provisions should be included in all relevant areas of public policy. Fire agencies should seek to influence the development of policy and legislation applicable in bushfire-prone areas; no policy or legislation should be inconsistent with public safety outcomes for bushfires.

Fire agencies should engage with other government agencies to facilitate a whole-of-government approach to bushfire-related policy development, and ensure that policies developed by those agencies are not inconsistent with fire agency bushfire policy and practice. For example, planned approaches to the treatment of risk for vulnerable groups in institutional care (e.g. schools, childcare facilities, group homes, aged care facilities and hospitals) by fire agencies and managers of institutions dealing with those risks should be consistent with each other.

Planning for protection from bushfire should happen at all levels. There should be a continuum of planning from the State or Territory level, through local government, to business owners, community members and householders.

The desire to maintain natural ecosystems is often in conflict with bushfire fuel management objectives. Government at all levels should seek to resolve this conflict in order to provide for public safety.

5.6 Fire agencies and their partners should implement a broad range of risk reduction measures

Emphasis should be placed on landscape scale approaches to the identification of bushfire risk based on ISO31000, to identify, describe and map bushfire risk across an area. Risk plans developed by fire agencies should identify assets within the

community that are at risk from bushfire, assess the level of risk, establish treatment options and identify who is responsible for carrying out those treatments.

- ***Land use planning***

Land use planning and development control exercised by State/Territory and local government should enhance community resilience to bushfire. Bushfire considerations should be incorporated into every phase of land development from land use zoning and subdivision design, to building siting and design, access provisions, landscaping and fuel management.

- ***Community planning***

Fire agencies, local government and other stakeholder agencies should collaborate to ensure appropriate and effective plans and strategies to provide for community safety are in place well in advance of a bushfire season, for all areas with a bushfire risk. These community protection plans should include provisions addressing bushfire prevention, and preparedness for, response to and recovery from bushfire.

Community protection plans should identify the locations of vulnerable people and provide for their protection, and for the protection of infrastructure and assets communities value. Plans should identify mitigation works to manage bushfire hazards impacting on public safety, and identify safe access and egress routes during fires, fire refuges and firefighting water supplies.

Planning for the protection of frail people should take into account that evacuation, particularly during hot weather, can cause significant stress and has resulted in fatalities.

Fire agency response plans should complement community protection plans, and provide contingencies for a range of possible situations.

All plans should be documented, tested, practiced and periodically reviewed.

- ***Business, household and event planning***

As business owners/managers and householders do not necessarily make the best decisions in times of stress, bushfire survival plans will help appropriate decisions to be made during emergencies. Householders and business owners/managers should be encouraged by fire agencies to develop bushfire survival plans, including contingency actions for a range of possible situations. These should be documented, tested, practiced and periodically reviewed.

Fire agencies should provide tools to enable householders and business owners/managers to assess the risk to their property and occupants.

Fire agencies and event managers should encourage those holding private and public events such as weddings, sporting events and family parties to make contingency plans in case bushfire threatens.

Planning, particularly at the community, individual business and household level can have significant benefits for community safety. Legislation should facilitate bushfire planning and preparation.

5.7 Fire agencies should engage with at-risk communities, and seek to influence their preparedness for bushfire

Fire agencies should seek to engage with communities in bushfire-prone areas and encourage them to take steps necessary to prepare for and respond to bushfires. Agencies should engage communities with clear language, and inform them about the threats posed by bushfire, and the risks of different choices.

Fire agencies should provide information and tools that will assist people to make informed decisions during bushfire emergencies, and work with all stakeholders to ensure community needs are incorporated in fire agency strategies.

Fire agencies and their partners need to adopt different approaches for different communities and people. For example, strategies need to be put in place to address the particular needs of culturally and linguistically diverse (CALD) communities, which are often at increased risk due to language and cultural barriers, and for socially isolated people. For all of these groups, access to necessary information via traditional channels will often be ineffective.

5.8 People in bushfire-prone areas should make their own decisions and preparations for how they will respond to the bushfire threat

- **Decision-making**

Many people will not have made a decision or adequately planned or prepared for bushfires. Fire agencies should consider this in the information they provide to people at risk and in any bushfire information, alerts and warnings.

Fire agencies should advise people in bushfire-prone areas of the following:

- ❖ People living in bushfire-prone areas need to decide in the months, weeks and days before a bushfire occurs if they are going to leave for a safe place if a bushfire threatens, or stay and defend their property. This decision must be understood by all people at the property.
- ❖ People must take into account their personal circumstances, including their physical fitness, mental preparedness, the capacity of others likely to be present, the defendability of their property in the expected bushfire conditions, the resources available, the likely loss of water pressure and power and the limited availability of options should their plan be compromised. People need to consider in advance how they will care for pets and livestock.
- ❖ Having to care for vulnerable people such as frail aged people, children or people with disabilities while defending a building can compromise firefighting efforts and hence the safety of all present. Anyone who cannot make a significant contribution to the active defence of a building should be relocated to a safe place well before a bushfire threatens.
- ❖ People should understand the risks they face and explore options well in advance of the bushfire season. Their plans should be adaptable, as circumstances may change before and during bushfires.
- ❖ Those considering staying must be aware of the debilitating effects of heat, dehydration and firefighting on stamina, even for physically fit people. They should consider the ferocity and violence of a bushfire and their ability to remain calm and make rational decisions in a high stress environment.

- ❖ Defending a property in a bushfire can be a traumatic experience due to the physical factors of heat, smoke and exertion, as well as stresses that life threats create.
- ❖ People should plan to leave early unless they are committed to making the significant effort necessary to be fully and properly prepared to stay and defend their properties.
- ❖ Non-residents including workers, visitors and tourists who have no direct interest in actively defending property threatened by bushfires should be encouraged to leave early for a safe place when a bushfire threatens. However, under some circumstances, able-bodied people may remain to assist fire agencies mitigate the impact of a bushfire.

- **Preparation**

Fire agencies should advise people in bushfire-prone areas of the following:

- ❖ Regardless of the decision to leave early or stay and defend, people need to prepare to ensure they will be safe when bushfire threatens.
- ❖ People intending to leave must identify the circumstances that will trigger their final preparations. The trigger may be a forecast of high fire danger or the proximity of a bushfire. Regardless of the trigger, it must occur well before an approaching bushfire compromises their capacity to relocate safely. They must plan how they will monitor and receive information and warnings about nearby bushfires, where they will go, how they will get there and what they will take with them.
- ❖ Even if the intention is to leave, occupiers should prepare their properties so they can be defended in a bushfire. An adequately-prepared building is more likely to be defensible by firefighters, and more likely to survive a bushfire if undefended. Most importantly, if there is insufficient time to leave safely, an adequately-prepared building can provide shelter from radiant heat and, provided it is actively defended, can be protected in most circumstances. However, it must be recognised that some buildings, due to their construction methods, construction materials, the site they are located on or their proximity to high and unmanaged fuel loads, cannot for all practical purposes be defended against high intensity bushfires.
- ❖ A critical aspect of building preparation is the creation and maintenance of a space within which a building can be defended against bushfire embers and radiant heat by both occupiers and firefighters. Within this defensible space, bushfire fuels must be reduced to prevent or significantly reduce the ability of a fire to burn and spread to buildings. Other preparatory measures, including ember-proofing, should be taken to minimise the chance of a building igniting.
- ❖ While sufficient defensible space provides a measure of protection against radiant heat, it does not eliminate the impact of burning embers; often described under 'extreme' and 'catastrophic' conditions as an 'ember storm'. Hence the need to actively defend buildings during bushfires, rather than shelter in them passively.
- ❖ Construction standards and other bushfire protection measures have been developed to provide better protection for buildings in bushfires. Fire agencies

should encourage building owners in bushfire-prone areas to upgrade their buildings, where feasible, to meet these standards.

- ❖ Once prepared, properties should be maintained in a bushfire-ready state year round. An unprepared property is not only at risk itself, but once ignited, may also endanger neighbouring properties. Firefighters may not be able to defend unprepared properties.
- ❖ For those planning to defend their homes, they must ensure that they are fit, and have personal protective equipment, adequate water supplies and firefighting equipment for the expected fire conditions. Firefighting equipment needs to be resistant to the effects of fire, and tested regularly to ensure it is in good working order.
- ❖ Preparation must also include identifying a number of places that people can flee to at very short notice as a place of last resort. If such nearby safer places cannot be identified, people should plan to leave early.
- ❖ People may choose to include in their preparations a personal fire shelter close to their home. The shelter must be designed and built in accordance with relevant standards.

It is critical that such a shelter is not relied on as the sole protective measure for living in a bushfire-prone area. A personal fire shelter should be regarded as an option of last resort, and must be used in conjunction with other planned measures. Where people are planning to rely on these shelters, they should be urged to consider how they will react in the face of a life threatening bushfire.

- ❖ As there may be some circumstances in which even very well-prepared buildings are unlikely to survive, people planning to defend their homes must also identify a trigger that will prompt them to leave early. For example, they should plan to leave early if a pre-determined fire danger index is expected on the day a bushfire threatens their property.

5.9 People threatened by bushfires need ready access to accurate information and timely warnings to take effective action

Issuing accurate and timely information and warnings should be the highest priority for fire agencies when bushfires are burning during periods of increased fire danger, to enable people to make appropriate decisions concerning their safety.

Arrangements established by fire agencies with mass media outlets to issue advice and warnings should be robust, formalised and practised. Web-based systems should be designed to cope with expected peak traffic loads.

In order to get the attention of media and people in bushfire-prone areas, agencies should consider pre-emptive notifications of potential bushfire emergencies.

• *Information*

Information for threatened communities should be gathered by the fire agency and distributed through a variety of media appropriate to the situation, such as radio, television, newspapers, local newsletters, internet sites, recorded/staffed telephone messages, face-to-face contact and leaflet drop.

Fire agencies should provide the media and the community with information that is accurate, relevant, adequate, consistent, useful and timely. Sufficient information should be provided to enable those who may be threatened by bushfire to make timely and informed decisions about whether to relocate to a safe place or stay and defend their properties.

As the print and electronic media are a primary means of providing information to the community, and media organisations have a legitimate right to information regarding bushfire events, incident controllers should facilitate their access to relevant information and bushfires. Media access to the fireground should be coordinated to ensure the safety of media crews.

Fire agencies should inform the public and the media about where and how to obtain information about bushfires.

- **Warnings**

Fire agencies should have processes in place to enable the issue of timely warnings to enable people threatened by bushfire to safely and effectively respond to the threat. Warnings should contain specific information and direction rather than vague advice. Warnings should conform with the Common Alerting Protocol (CAP).

Warnings should be broadcast using as wide a range of relevant media as practicable, including Emergency Alerts, to ensure the widest possible dissemination. Where appropriate and necessary, official warnings should be preceded by the Standard Emergency Warning Signal (SEWS).

Fire agencies should advise people to actively seek information on bushfires and be alert for official warnings when high fire danger periods are forecast or bushfires are burning. However, people should be encouraged to exercise judgement and initiative and be prepared to implement their bushfire survival plans in the absence of official warnings, as prevailing conditions at times may prevent fire agencies gathering information and issuing warnings.

As the number and/or intensity of bushfires increases, it may become increasingly difficult for fire agencies to gather information and issue warnings. As these circumstances increase the risk to people in bushfire-prone areas, agencies should develop contingencies to enable them to continue to gather information and issue warnings.

There are occasions when bushfires develop rapidly and threaten people and their properties with little or no advance notice. In these circumstances, fire agencies have limited or no opportunity to issue warnings and many people are taken by surprise. Fire agencies should encourage people to remain situationally aware and responsive to environmental cues on days when bushfires are possible, so they can respond appropriately in the absence of official warnings.

5.10 People usually have two safe options when threatened by bushfire: leaving early or staying and defending adequately prepared properties. Leaving early is always the safest option

- **Preparing, and leaving early**

Fire agencies should advise people that not being in an area threatened by bushfire is always safer than being in an area under threat. Hence, leaving a bushfire-prone

area when extreme fire weather is forecast is the safest option, and leaving early when a bushfire threatens is always safer than staying. When bushfires are burning on days when 'extreme' or 'catastrophic' fire danger ratings are expected, leaving early may be the only safe option, even for people planning to defend well-prepared buildings.

Despite the clear safety benefit of leaving early, research shows that it is unlikely most people will routinely relocate from bushfire-prone areas when fire danger is forecast. Regardless, fire agencies should continue to promote this as the safest option. Fire agencies should advise people that 'leaving early' means leaving before the chosen escape route is compromised by fire and smoke, or by strong winds that may bring down trees and powerlines well before the fire arrives. People planning to leave early should be encouraged to leave many hours before a bushfire burning in the vicinity is likely to threaten them and their escape route.

People in close proximity to an outbreak of fire may have insufficient time to leave before the fire compromises their escape route. Hence fire agencies should encourage people to maintain their property in case they have no option but to shelter in it, and to have contingency plans in the event that they are subsequently unable to defend their property. Contingency plans should include relocation to a fire refuge, or to a nearby safer place.

Fire agencies should advise people that a fire refuge, where available, may be an accessible and safe place for those leaving early. Other options for those leaving early include built-up areas of towns, preferably located away from areas likely to be impacted by bushfire. It should be emphasised that it may not be safe to travel through fire affected areas for those leaving late.

- ***Preparing, staying and defending***

Fire agencies should advise people living or working in bushfire-prone areas of the following:

- ❖ Staying to defend property during a bushfire always carries with it the risk of injury or death. However, defending a well-prepared building is a reasonable choice for many physically fit and emotionally prepared people in less than extreme fire conditions. Defending a building in 'extreme' or 'catastrophic' fire danger conditions often will pose a grave risk to life regardless of how well prepared people are.
- ❖ Many buildings lost in bushfires ignite from small fires caused by sparks and embers. Ignition often occurs immediately before, during, or up to several hours after the passage of the main fire. Other buildings ignite due to radiant heat or direct flame contact. Ignition from radiant heat and flame contact can be avoided if sufficient separation from the bushfire hazard (that is, defensible space) has been provided. By extinguishing small initial ignitions, people of adequate mental, emotional and physical fitness, equipped with appropriate skills and resources can save a building that would otherwise be lost in a fire.
- ❖ Hence people staying should actively defend their property rather than shelter in it passively. Even when driven inside by smoke, embers or radiant heat, people should continue to actively defend their property.

Fire agencies should inform people defending their property that they must develop contingency plans, as even the defence of a well-prepared building can be compromised. Burns, injury, exhaustion, a more intense fire than anticipated, failure of equipment, loss of power supplies or water, structural damage to the building caused by wind or flames, or some other unforeseen circumstance can compromise plans.

Fire agencies should inform people that should a building in which they are sheltering catch fire, they should close all internal doors and shelter by an exit as far from the approaching fire as possible, exiting only when conditions in the building become untenable. People should be discouraged from sheltering in rooms close to the fire or with only one exit. A laundry with an external door and a water supply may provide shelter; bathrooms and other rooms without external doors do not.

Fire agencies should encourage people sheltering in buildings that become untenable to flee to the nearby safer place that they identified in their bushfire survival plan.

Fire agencies should encourage people to make provision for other scenarios that may arise; for example, actions to take should a bushfire threaten on a weekend versus a weekday, plans if the family is away on holiday, or if children are at home alone, friends are visiting, or if the primary carer has a debilitating injury or illness on the day a bushfire threatens.

5.11 Many people fail to prepare adequately for bushfires, leave it too late to make critical decisions, and have few safe options. They are vulnerable and need direction

Fire agencies need to take into account that relatively few people in bushfire-prone areas make decisions or effective plans before bushfires threaten.

When bushfires *do* threaten, many people don't make timely decisions about what they will do. Rather, they wait until the fire is close before making decisions. Safe options available to people who linger when fires are burning under 'severe', 'extreme' or 'catastrophic' fire danger ratings are often severely limited. Being away from the fire under these conditions is often the only safe option, yet travel over even very short distances is likely to be hazardous if the decision is made late.

Hence, when fires threaten, fire agencies should, when possible, provide early advice and warnings about bushfire threats, about where people may relocate to and safe egress routes. Warnings should include, for any people unprepared for the expected conditions, a recommendation to evacuate if sufficient time is available. For those with insufficient time to evacuate, warnings should also include advice about potential places of nearby shelter.

Given the dynamic nature of fires and places that may offer shelter, it is impractical for fire agencies to identify individual nearby safer places in sufficient numbers to provide options for people in bushfire-prone areas. However, agencies should provide guidance to enable people in bushfire-prone areas to select these places for themselves.

Fire agencies should promote the use of nearby safer places as places of last resort; as a contingency in the event that plans to leave early or to stay and defend

can't be realised. On no account should nearby safer places be promoted as the first option, or as the only option.

5.12 Vulnerable people who cannot cope with bushfire may need assistance to relocate well before fire impacts

Due to physical, mental or emotional incapacity to cope with the expected circumstances, some people may be safer re-locating rather than remaining with their properties if threatened by fire.

Agencies, including government and non-government agencies, should pay particular attention to providing for vulnerable residents who may need or wish to be relocated ahead of a bushfire. Plans need to be made well in advance to cope with the expected numbers and special needs of vulnerable people. Particular consideration should be given to the needs of people who may be relatively immobile due to age, disability, injury or illness, who have special medical needs (e.g. respirators, dialysis) or require the care of others (e.g. young children, people with mental disabilities). Some people may need assistance with relocation.

Formal and informal community networks and community groups may assist in the identification of, and planning for, vulnerable people in the community.

Support agencies should advise vulnerable people living in areas where warning times may be very short to consider relocating permanently.

5.13 Large scale evacuation is not the default option, although in some circumstances it may be the safest option

The development of community plans that incorporate evacuation should be a collaboration between local government emergency management coordinators, police and the fire agency. Plans should include provisions for people with limited mobility who may need assistance. Evacuation plans should be practised and reviewed periodically.

As fire danger indices approach 100, even well-prepared buildings may be difficult to defend. Under such circumstances, fire agencies may recommend evacuation of *all* those threatened.

Planned and orderly evacuation well ahead of the fire is always preferable to last minute evacuation. Fire agencies should consider the likelihood of entrapment or being overrun by bushfire during an evacuation. If evacuation is considered unsafe then an alternate option identified in the evacuation plan should be implemented.

5.14 Incident controllers should seek information that will enable them to make decisions about whether to recommend evacuation

Ideally, people should make the decision to leave for themselves.

However, there may be circumstances during a bushfire where evacuation may be recommended by the incident controller, influencing individual choice in the interests of public safety. Incident controllers should seek information that will enable them to make timely decisions about whether to recommend evacuation.

While well-executed evacuations are likely to save lives, increased property loss is almost inevitable. When considering whether or not to recommend evacuation,

incident controllers must give priority to the protection of life, and should refer to the relevant evacuation plan if available.

Where legislation confers on the police service or another agency the power to order an evacuation, a formal agreement should be developed between fire agencies and police or the other agency to specify procedures for consultation should evacuation be contemplated.

Evacuation of residents or others (e.g. campers) who resist should not be pursued at the cost of missing out on evacuating others, or where this would unreasonably endanger the lives of police officers or others.

5.15 Last minute relocation or evacuation is dangerous

Relocation or evacuation at the last minute ahead of a bushfire is dangerous; particularly if this involves evacuation *towards* the fire or through areas that may be affected following a wind-change. Smoke, noise, heat, flames, fallen trees and powerlines, firefighting vehicles and stress all make fleeing in a vehicle or on foot dangerous. The risk of being overrun by fire is very real and has resulted in numerous fatalities. People caught in the open are likely to face severe and often fatal levels of radiant heat.

To be effective bushfire evacuation or relocation must not expose people to a higher risk than that they would be exposed to if remaining within the bushfire impact area.

5.16 Road access must be carefully managed during fire events

Fire agencies should make it clear that travel can be very dangerous during bushfires due to smoke reducing visibility, fallen trees and power lines, stressed drivers and the risk of fire overrun. Road use should be carefully managed to ensure public safety and unimpeded access for firefighting vehicles.

Access should be managed by police on the advice of the fire agency, with safety as the overriding priority. Provided it is safe, access should be maintained for residents and landowners, and denied to sightseers. Access should be limited whenever conditions are unsafe.

Access to residents and landowners should be restricted in any areas where evacuations have been recommended.

Firefighting vehicles should not be impeded at road blocks unless the road has been closed to firefighters by the incident controller.

5.17 Fire agencies can and should support community recovery

Planning for effective community recovery from bushfires is an essential component of bushfire management. Fire agencies should collaborate with local community recovery coordinators and where possible, facilitate and support the recovery of communities and infrastructure. Establishment of a sense of partnership between the community and firefighting agencies is essential for successful recovery from bushfire events.

Fire agencies' most important contributions to community recovery are delivered during the planning and response phases, by planning for and protecting people and the assets that will help communities recover after the fire.

The location of vulnerable people and the assets communities' value, and plans to provide for their protection during bushfires, should be the focus of fire agency pre-fire community protection plans. These plans should be developed in collaboration with local government and other community representatives.

6 Supporting Documentation

AFAC, *Prepare, leave early or stay and defend*, 2009 (Draft discussion paper)
AFAC, *Planning and development in bushfire prone areas*, 2009 (Draft discussion paper)
AFAC, *Bushfire bunkers for residential homes*, 2009 (Draft discussion paper)
AFAC, *A national systems approach to community warnings*, 2009
AFAC, *AFAC Guidelines for people in cars during bushfires*, 2008
Australian Emergency Management Committee National Bushfire Warnings Taskforce, *Australia's revised arrangements for bushfire advice and alerts - 2009/2010 Fire Season*, 2009
Australian Commonwealth, *Emergency Warnings - Choosing your words*, 2008

Definitions

For the purposes of this paper, the following definitions apply:

Assets communities value: assets a community has identified as a priority for protection because they have high social, economic, historical, cultural or environmental value. Given the diverse characteristics of communities across Australia, these assets may differ from place to place. As a rule, the protection of these assets will assist the community recover after the fire.

Bushfire: an unplanned fire burning in bushland, grassland, moorland, heath mallee, plantation or other vegetation or crops.

Bushfire-prone area: an area of land that can support a bushfire or is likely to be subject to bushfire attack. This may include vegetated areas within built-up areas.

Evacuation: the movement, following an official recommendation or direction, of people from an area impacted or likely to be impacted by a bushfire.

Fire agency: an urban or rural fire agency, or a land management agency with statutory responsibility for the protection of people and/or community assets from bushfire.

- Fire refuge:* an officially designated place that people can relocate to or evacuate to that provides safety during a bushfire. These places provide shelter from radiant heat and embers, and are equipped with at least drinking water and toilet facilities.
- Nearby safer place:* a nearby place that people can relocate or evacuate to quickly when threatened by fire, which provides adequate shelter from radiant heat. Shelter may be achieved by distance from fuels/flames, or by a building, or other solid structure. Nearby safer places are informal places, usually identified by residents, although fire agencies may identify and announce nearby safer places at short notice for a particular fire. Nearby safer places may include but are not limited to towns, rivers, creeks, swimming pools, dams, beaches, ploughed or green fields, extensive areas of cropped grass including golf courses, recreation grounds and community parks, and personal shelters.
- People:* any person in or travelling through a bushfire-prone area. This includes residents, employees, visitors, travellers and firefighters.
- Personal fire shelter:* a structure often called a bunker and built adjacent to a home, to provide shelter from fire. Personal shelters should be designed, built and maintained in accordance with relevant Australian Standards.
- Relocation:* the self-initiated movement, in the absence of an official recommendation or direction, of people from an area impacted or likely to be impacted by a bushfire.
- Vulnerable:* if present when bushfire threatens, and likely to be impacted adversely due to age, frailty, physical or mental disability, social isolation, illness, injury, need for support, cultural or linguistic diversity, or lack of preparedness for bushfire.