



RISK AND REFUGE

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Much attention and effort has been focused on developing policies and procedures to assist people who are in their homes in the event of a bushfire. However, less attention has been given to the needs of those who are not at home when bushfires threaten, including travellers, visitors and tourists, and those located at work, in hospitals or other health facilities, or in schools, kindergartens or child care centres.

Greater consideration must be given to identifying areas of risk more broadly. People need a range of options to increase their safety and chance of survival during the passage of a bushfire, especially when they are not at their homes, or when their home does not provide adequate protection. This chapter explores bushfire risk areas, considers options for fire refuges and other 'safer places', and assesses the special needs of schools and children's services.

IDENTIFYING BUSHFIRE RISK

- 8.1 Areas of Victoria at risk of bushfire are identified in several different ways. The evidence to date has revealed different processes for identifying areas at risk for the purposes of:
- emergency management planning
 - land use planning
 - building regulation.
- 8.2 In its submissions and further material, the State raised a further process for identifying areas of bushfire hazard — township protection planning.¹
- 8.3 In accordance with section 20 of the *Emergency Management Act 1986*, local councils must prepare and maintain a Municipal Emergency Management Plan (MEMP) that identifies and describes risks in the community, including the risk of fire.
- 8.4 Part Six of the *Emergency Management Manual Victoria* (the Manual) contains guidelines for municipal emergency management planning which use a risk management approach to identify and assess the risks that might give rise to an emergency in a municipality.² The MEMPs for the Mansfield Shire Council and the Baw Baw Shire Council were tendered to the Commission through Mr Robert Spence, the Chief Executive Officer of the Municipal Association of Victoria (MAV).³ Both MEMPs refer to the hazard analysis undertaken in their preparation, and set out the results of that analysis.⁴ Bushfire is identified as a risk for both municipalities.
- 8.5 For land use planning purposes, a wildfire management overlay may form part of a municipal planning scheme, to identify areas at particular risk from wildfire. The purposes of wildfire management overlays include:

To identify areas where the intensity of wildfire is significant and likely to pose a threat to life and property.

To ensure that development which is likely to increase the number of people in the overlay area:

- *satisfies the specified fire protection objectives.*
- *does not significantly increase the threat to life and surrounding property from wildfire.*

To detail the minimum fire protection outcomes that will assist to protect life and property from the threat of wildfire.⁵

- 8.6 Designation of a wildfire management overlay by a local council imposes planning controls to ensure that:
- water is available to enable life and property to be defended from wildfire
 - there is safe access for emergency and other vehicles
 - the design and siting of buildings and works improves protection for life and minimises the level of fire impact
 - fuel (ground fuel and shrubs) is managed to reduce potential fire intensity in the vicinity of buildings.⁶

- 8.7 The Country Fire Authority (CFA) has published a guide for residents *Building in a Wildfire Management Overlay – Applicant’s Kit*.⁷
- 8.8 For building regulation purposes, the designation of an area as a bushfire prone area triggers the application of bushfire-specific performance criteria in the *Building Code of Australia*.⁸ *The Building Code of Australia* in turn references *Australian Standard 3959– Construction of Buildings in Bushfire Prone Areas*.⁹ Until March 2009 a council could designate areas in its municipal district as bushfire prone areas.¹⁰ On 11 March 2009, the Building Amendment (Bushfire Construction) Interim Regulations 2009 effectively designated the whole of Victoria as a bushfire prone area, having the effect that all new buildings must undergo a site assessment to determine the level of bushfire hazard and whether specific construction requirements apply. These Regulations expire on 10 March 2010.¹¹
- 8.9 The Commission has not assessed the extent to which these existing processes are integrated. It intends to deal with building and planning matters in its forthcoming hearings. It may address the issue of integrating risk assessment methods in this context.
- 8.10 The Commission notes that fragmented planning, including risk identification, was one of the factors that lead to the development of the Integrated Fire Management Planning Framework (IFMPF).¹² The IFMPF arose from recommendations made in the Report of the Inquiry into the 2002–2003 Victorian Bushfires, for a new, consolidated approach to fire management planning.¹³ The recommendations aimed to achieve:

*... greater consistency, more effective co-ordination, better co-operation, effective and concurrent implementation of response and recovery activities and reduced duplication of effort.*¹⁴

- 8.11 The IFMPF was endorsed by the State in September 2006 and a State Fire Management Planning Committee established in October 2007.¹⁵ A draft State Strategy for the IFMPF has been prepared and circulated to stakeholders for comment.¹⁶ However, the IFMPF is unlikely to be implemented before 2012.¹⁷ While progress has been slow, it is clear from the evidence of Mr Norman Free, the Manager of the State Fire Management Planning Support Team, that considerable work has gone into integrating State and municipal fire management planning.¹⁸
- 8.12 The Commission endorses the concept of integrated, whole-of-government, fire management planning and hopes that this effort leads to planning processes that are easier to use and make communities safer. The Commission shares the frustration expressed by Mr Bruce Esplin, Emergency Services Commissioner, and Mr Free, at the slow progress in implementing this concept.¹⁹
- 8.13 Principle One of the draft State Strategy for the IFMPF, ‘Planning Together’, includes consistent assessment of risk.²⁰ The State Fire Management Planning Committee is considering the adoption of a risk assessment tool, known as the Victorian Fire Risk Register (VFRR), to enable consistent assessment of risk across all agencies.²¹ The VFRR is a Victorian version of a mapping application, developed by the New South Wales Rural Fire Service, and used in fire management planning. A handout produced by the CFA describes the VFRR as:

... a systematic process that identifies assets at risk from wildfire, assesses the level of risk to assets and provides a range of treatments to mitigate the risk. Treatments may include activities such as fuel reduction, community education programs and safety audits.

*The output process is twofold. A series of large output maps are produced displaying assets at risk and risk mitigation treatments, supported by a short document which provides the context, the community participation strategy, a summary of the assessment process and a textual record of all assets and treatments.*²²

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- 8.14 A paper prepared by Mr Russell Rees, Chief Officer of the CFA, for the State Fire Management Planning Committee (26 March 2009), reported positively on trials of the VFRR. It noted the lack of a consistent, state-wide approach to identifying, prioritising and documenting wildfire risk across Victoria, and recommended the approval and funding of the VFRR implementation plan.²³ The Commission was not told informed whether the State Fire Management Planning Committee approved implementation of the VFRR. It infers from the evidence of Mr Free that implementation was delayed whilst awaiting the outcome of further trials of the VFRR.²⁴ Subject to the outcome of those trials, the Commission endorses the CFA's proposal to approve the implementation of the VFRR.
- 8.15 There may be processes for identifying areas at risk of bushfire in addition to those discussed above. The State referred in its submissions to a process of township protection planning as part of the CFA's operational preparedness, to determine the level of fire fighting and other resources required by communities during a fire emergency.²⁵ One key component of the township protection planning process will be:
- ... a mapping component that identifies and details the demography and topography of a township and surrounding area. This includes the identification of assets, heritage areas, critical infrastructure, community gathering locations and particular areas of hazard.²⁶*
- 8.16 In its submissions the State also raised the proposed designation of neighbourhood safer places (paragraphs 8.114 to 8.133).
- 8.17 The Commission has been provided with only an outline of both proposals and did not have the benefit of examining the proposals in its hearings.²⁷ Given the similarity in aims between the VFRR and the proposed township protection plans, the Commission encourages the integration of these processes. The Commission also encourages those developing the State's proposal to extend township protection planning to ensure that it takes into account the considerable work that has already been done to bring about integrated, whole-of-government fire management planning.
- 8.18 On the evidence considered to date, the VFRR looks to be a most useful tool with which to designate areas at risk of bushfire in Victoria. Any areas identified by the VFRR should be referred to in the MEMPs of relevant local councils.

RECOMMENDATION 8.1

The CFA report to the Commission on the outcome of the trials of the Victorian Fire Risk Register and progress with its implementation.

RECOMMENDATION 8.2

The Municipal Association of Victoria report to the Commission on the progress of amendments to Municipal Emergency Management Plans by those municipal councils trialling the Victorian Fire Risk Register.

FIRE REFUGES AND SAFER PLACES

PROTECTION OF LIFE: OPTIONS FOR THOSE SEEKING SAFETY

- 8.19 Those who find themselves threatened by bushfire need options. During bushfires, some people will find themselves in circumstances where they need to take shelter other than in their homes. This may be because their plan to defend their home cannot be implemented in the circumstances, or their plan fails and the house burns. They may also plan to leave but are unable to reach a place away from the firefront in time. Visitors to an area threatened by fire may find themselves caught in the open and some people may not have planned well enough for the risk of fire. Finally, some people with well prepared plans may change their minds when faced with an extremely dangerous fire.
- 8.20 Once it is accepted that the protection of human life is paramount, it is clear that provision must be made for residents and visitors who need to resort to a 'Plan B' or 'Plan C' during the course of a fire.
- 8.21 In 2005, the Office of the Emergency Services Commissioner (OESC) produced the Victorian Government's current policy on fire refuges, *Fire Refuges in Victoria: Policy and Practice* (the 2005 Fire Refuges Policy).²⁸ The policy, and the considerations that underpinned its development, are discussed in this chapter. One of its core tenets is that the 'provision of a fire refuge is a municipal decision, to be based on the rare and exceptional circumstances where other bushfire safety strategies are less effective'.²⁹
- 8.22 Since the application of the 2005 Fire Refuges Policy, designated fire refuges have all but ceased to exist in Victoria. There are now only nine refuges, located in two municipalities.³⁰ The Commission believes this is primarily because the policy characterises refuges as appropriate only in 'rare and exceptional circumstances'.
- 8.23 Evidence before the Commission suggests that the 2005 Fire Refuges Policy gives insufficient weight to protecting life and to the range of circumstances in which people may need to seek shelter during the passage of a firefront. The Commission considers that a fundamental review of the policy is required to ensure that people have access to the broadest possible range of options in the event of a bushfire. The Commission is aware that the OESC has commenced a review of the Policy (see paragraph 8.111).

TERMINOLOGY

- 8.24 A refuge is a place that provides people with short-term shelter from the passage of a fire.³¹ In light of the evidence that people may need to seek refuge, the availability of refuges should be more systematic than being available in 'rare and exceptional circumstances'.
- 8.25 In keeping with its conviction that the protection of human life is paramount, and that individuals and government share responsibility for risk identification and mitigation, the Commission proposes both government identified and managed refuges, and private arrangements by individuals. Consistent with the notion that Plan A is a household's or institution's primary fire plan, and that Plan B or Plan C are additional, less preferred, options for emergency circumstances, the following types of refuges are proposed:
- **Designated community fire refuges**, identified, constructed or refurbished by the State (following the review of the 2005 Fire Refuges Policy) and maintained by councils
 - **Neighbourhood safer places**, identified by the State in consultation with councils, and maintained by councils. It is noted that the State's proposal suggests that the CFA would assess and manage neighbourhood safer places
 - **Privately identified safer places**, being arrangements made by individuals should their plan to stay and defend fail, or should they find themselves otherwise exposed. These arrangements could include options like their own in-ground swimming pool, or a neighbour's ploughed paddock.
- 8.26 None of the options outlined above can completely guarantee the safety of those who use them. In particular, care needs to be taken to ensure that it is understood that Plan B and Plan C are 'safer places' that may increase a person's chance of survival, but still entail some risk, both in moving to them during a fire, and while sheltering in them. They cannot be considered, nor should they be described as, 'safe'.

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- 8.27 While not the Commission's preferred terms, some witnesses made reference to 'informal refuges' and 'ad hoc' refuges. This is an area, like the language used for describing a fire, which needs further work. The issue of accurate, accessible and succinct language for fire, refuges and other matters will be considered by the Commission in future hearings.

HISTORY OF FIRE REFUGES IN VICTORIA

- 8.28 There is a significant history of fire refuges in Victoria as summarised below.³²
- 8.29 The *Report of The Bushfire Review Committee on Bushfire Disaster Preparedness and Response in Victoria, Australia, following the Ash Wednesday Fires 16 February 1983* (Ash Wednesday Report) considered refuges.³³ The Ash Wednesday Report noted that no comprehensive policy or system existed for bushfire shelters prior to the 1982–83 bushfire season. However, the material available to the inquiry indicated that there had been instances in which 'large numbers of people found communal shelter in large, well-constructed buildings and survived, even though the fire threat outside the buildings was acute'.³⁴ The report states:

*Under local disasters plans, consideration should be given to designating buildings which could serve as emergency communal shelters. Such buildings would need to be assessed by a competent authority for their fire-resistant capability and for availability of fire-fighting equipment and water supply.*³⁵

- 8.30 The Ash Wednesday Report recommended that there be an examination of:

Assistance by the State Government to local government in the provision or adaptation of buildings which could serve as communal shelters.

*Suitability of school buildings for use as shelters, particularly to mitigate the possibility of students being exposed to risk by being sent home ahead of an advancing fire front.*³⁶

- 8.31 Following the recommendations in the Ash Wednesday Report, fire refuges were established in Victoria in a number of fire prone areas. Signs were erected to indicate their location. Some refuges were buildings, others were simply open areas such as sports ovals and beaches.³⁷
- 8.32 In 1988, the State Disasters Council published a guide *Constructing a Public Building to Act as a Community Refuge* (the 1988 guide).³⁸ This document contained guidance about choosing suitable sites, and the design and construction of community buildings suitable for dual use as refuges:

If you are constructing a public building for your community, you should also consider making it a community refuge.

...

The protection offered by a building can be enhanced by incorporating the siting, design and construction procedures discussed in this paper.

...

A population with a knowledge of, and confidence in a refuge is less likely to depart in a confused, dangerous headlong rush to hoped-for safety when a natural emergency threatens, or has happened.

*The physical presence of a community refuge can act as a focus of hazard awareness and counter-disaster planning at the individual and family levels.*³⁹

- 8.33 These comments ring true. They are in marked contrast with the findings of the 2001 Working Party, set out below, which suggest that the provision of refuges, in and of itself, tends to render the population less self-reliant and more likely to leave their homes 'as late as possible' seeking refuge. The 1988 guide contains a number of useful recommendations, including use of non-flammable materials, sealing external openings, and using concrete slabs and steel roofing.⁴⁰ These recommendations appear to provide a sensible set of criteria that might be applied when building a community venue that might also serve as a refuge. The Emergency Services Commissioner is urged to reconsider this guide in his review of the 2005 Fire Refuges Policy.⁴¹

- 8.34 In 1997, a Coronial Inquiry into deaths during fires in the Dandenongs found that there was community confusion about the location of refuges, and about the difference between refuges and relief centres.⁴² During those fires, several hundred people sought shelter at the Ferny Creek Horticultural Centre, which was a designated fire refuge.⁴³ There was confusion on the day, as emergency services were not aware of the presence of these people. A number of other people sought shelter at other locations that were not designated refuges. The Coroner noted that:

Many residents were unsure of the location of the emergency shelters and relief centres. There is a lot of confusion in relation to what a fire refuge is and what an emergency shelter is. Many residents self evacuated to locations that were not designated evacuation centres which placed them at risk as no police or other support services knew that they were there and therefore could not assist or register same.

One of the most important issues for the effective management of large numbers of people during a major 'wildfire' emergency is the provision of safe community fire refuges and emergency shelters ...

In addition it is important to ensure that any designated 'fire refuge' or 'emergency shelter' is in fact safe for the community in the event of bushfire.⁴⁴

- 8.35 Following the 1997 Coronial Inquest, a working party of representatives from the CFA, the then Department of Natural Resources and the Environment, the Victorian State Emergency Service, the Department of Justice, Victoria Police, MAV, and a number of councils (collectively referred to as the 2001 Working Party) undertook a review of the use of fire refuges. In April 2001, the working party published its findings in a report titled *Examining the role of fire refuges in helping people minimise the risk of bushfire in Victoria*.⁴⁵ The 2001 Working Party reached a view that refuges had become 'untenable', and recommended their abolition. It concluded:

The current formal designation of public refuges in some parts of the state is untenable and dangerous in the context of very high to extreme bushfires because:

- *Refuges have neither been selected nor maintained in accordance with any performance criteria or standards;*
- *Many refuges are located so far from their population catchment that people would need to drive to them – an extremely dangerous practice;*
- *Most refuges could not cope with their current population catchment;*
- *Adjacent vegetation or the refuge being locked when needed could compromise their safety.*

Municipal councils are exposed to the risk of liability by designating public refuges. If councils were indemnified in respect of such liability, they could not guarantee safe shelter during very high to extreme bushfires in designated fire refuges.

Even with discontinuance of the use of fire refuges, the inappropriate legal exposure of councils needs to be addressed as a matter of urgency.

Visitors and other non-residents need special consideration in bushfire safety. It is assumed that they do not know the location of designated refuges nor access routes.

Local, well chosen informal places of shelter (particularly as part of a personal survival strategy) offer people of Victoria a better chance of surviving a high intensity bushfire than designated / formal fire refuges.

The best chance to survive a bushfire is through community education to understand the need for, and the development of, a personal survival plan. Through their planning, people will decide to 'stay and defend' or 'leave early'. If they decide to stay, their plan will help them to prepare their property to minimise the risk and assist them to locate an open space or building where they can shelter by or with their neighbours as the fire front passes through.⁴⁶

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- 8.36 The 2001 Working Party report recommended that, due to the risks associated with designated refuges, the Victoria Emergency Management Council should remove all reference to designated formal fire refuges in the Manual and formulate guidelines for ‘Local Informal Places of Shelter’.⁴⁷
- 8.37 The report of the 2001 Working Party also recorded the ‘strong view’ expressed by ‘more than thirty agencies and councils in attendance’ that the provision of designated fire refuges makes communities:
-
- *Less self reliant*
 - *More likely to evacuate an area late, in the knowledge that there is a **designated fire refuge** within driving distance*
 - *More prone to seek help from and even blame the relevant emergency authorities if something goes wrong.*⁴⁸
-
- 8.38 The suggestion that the mere provision of refuges increases the propensity of people to leave an area late was not supported by any formal research cited by the 2001 Working Party, nor was the suggestion that provision of refuges encourages the community to blame the emergency authorities.
- 8.39 The 2001 Working Party expressed a clear preference that the State cease designating refuges. However, it was accepted that the development of ‘informal places of shelter’ might occur. The 2001 Working Party report reveals the emergence of four strong themes, which have continued to feature highly in the debate about refuges:
- the involvement of councils in any aspect of provision or operation of refuges ‘exposes them to the risk of liability’
 - provision of refuges may undermine the ‘stay or go’ policy
 - it is difficult or impossible to guarantee the safety of refuges
 - informal places of shelter are preferred.⁴⁹
- 8.40 Each of these propositions find expression in the 2005 Fire Refuges Policy, which is discussed in more detail below.⁵⁰
- 8.41 The suggestion in the 2001 Working Party report that ‘local, well chosen informal places of shelter ... offer ... a better chance of surviving’ seems contradictory. Rather, people need to be advised that, even when refuges are formally designated, there may be occasions when it is not possible to safely reach them. In such cases, the person may need to fall back to a ‘Plan B’ or ‘Plan C’ to increase their chance of survival.
- 8.42 This does not diminish the need to provide designated community fire refuges in the first place — nor does it assist in determining whether any particular refuge is more, or less, safe than any other. The relative safety of each will depend on the circumstances of a particular fire, and the capacity of the individual to safely reach the refuge.
- 8.43 In 2001 the CFA developed draft guidelines for fire refuges and emergency relief centres.⁵¹ The performance criteria in the guidelines are very similar to the criteria ultimately set out in the 2005 Fire Refuges Policy. The CFA guidelines were used to assess existing or proposed refuges. Significant problems emerged, as the majority of refuges assessed by the CFA did not comply with the performance criteria.⁵² From 2001 onwards, most refuges in Victoria were decommissioned.⁵³
- 8.44 In 2003, an Auditor-General’s report, *Fire Prevention and Preparedness*, considered refuges.⁵⁴ Survey results presented in the report indicated that a significant proportion of residents (24 per cent in the Dandenongs and 30 per cent in Gippsland) planned to go to a local refuge if they left their homes during a fire.⁵⁵
- 8.45 The Auditor-General’s report noted that, following the work of the 2001 Working Party, some councils had removed all signage and information from refuges ‘because of concerns about legal liability’, and that, where signage did exist, processes for ongoing risk assessment, building and maintenance standards and operation in the event of a fire were insufficient.⁵⁶

8.46 The Auditor-General's report recommended that:

*...the OESC, in consultation with the CFA, the DSE [Department of Sustainability and Environment] and local government, urgently progress work on a consistent Statewide position on fire refuges which incorporates a risk assessment process, standards for fire refuges and aligns with the policy position on evacuation.*⁵⁷

8.47 The OESC conducted a lengthy review process that culminated in the State's 2005 Fire Refuges Policy.⁵⁸ The policy states that:

- fire refuges will only be provided in rare and exceptional circumstances
- the decision whether to provide a refuge rests with the municipal council
- if a refuge is to be provided, the refuge must comply with published standards and guidelines.⁵⁹

8.48 The performance criteria in the 2005 Fire Refuges Policy include 'fixed' and 'operational' components, including criteria for:

- siting and fuel management
- design and construction
- water and firefighting equipment
- capacity, availability and access
- facilities
- criteria for operation and for attendance by a fire crew.⁶⁰

REFUGES IN VICTORIA IN FEBRUARY 2009

8.49 Since the promulgation of the 2005 Fire Refuges Policy, no new fire refuges have been designated. Many venues are unlikely to meet the criteria in the policy.

8.50 On 7 February, the only existing designated fire refuges were:

- Mansfield Shire Council:
 - Woods Point mine adit
- Baw Baw Shire Council:
 - Walhalla Township
 - Dam wall, Moondarra Reservoir
 - Rawson Shopping Centre
 - Dam wall, Thomson Reservoir
 - Allambee Camp
 - Catherine Creek Recreation Camp
 - Noojee Hall
 - Tanjil Bren dugout.⁶¹

8.51 The Woods Point mine adit (or mining tunnel) refuge is dealt with in the *Woods Point and Surrounding District Community Safety Plan*, which is a sub-plan of the *Mansfield Shire Municipal Emergency Management Plan 2008–2010*.⁶² This is discussed in more detail below.

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- 8.52 The *Baw Baw Municipal Fire Prevention Plan 2007–2012* briefly refers to the eight refuges located in the shire.⁶³ It says:

Refuge Areas

*It is impossible to provide any location that is guaranteed safe from a wildfire, however, it is the MFPC's [Municipal Fire Prevention Committee's] objective, along with other organisations involved in emergency management, to define locations that may offer the best refuge for persons who may be affected by wildfire. This allows the brigades and the MFPO [Municipal Fire Prevention Officer] to request or provide for special treatment of an identified site to support its use in a fire emergency.*⁶⁴

- 8.53 It appears that very few designated refuges are located on council land. For example, Thomson Dam wall is operated by Melbourne Water, Moondarra Dam wall is operated by Gippsland Water and the Tanjil Bren dugout is on Department of Sustainability and Environment (DSE) property.⁶⁵ Rawson Shopping Centre is assumed to be a commercial operation, although it appears the centre car park is Council land. Noojee Hall is owned by the Council.⁶⁶ Mr Spence accepted in evidence that it was unlikely any money had actually been spent by councils on the existing designated refuges.⁶⁷ The Woods Point adit project was funded by a local grants program administered by Emergency Management Australia (part of the Australian Government Attorney-General's Department).⁶⁸
- 8.54 In his oral evidence, Mr Spence revealed concerns about a number of the refuges in Baw Baw Shire Council. Correspondence was produced that suggested some were not compliant with the 2005 Fire Refuges Policy. Those refuges have not, however, been decommissioned.⁶⁹

USE OF REFUGES

- 8.55 The Commission has heard evidence about two refuges that existed as at 7 February — the Woods Point mine adit (a formal designated refuge, recognised under the relevant MEMP) and the Walhalla Long Tunnel Extension mine (which is not officially designated).⁷⁰ These refuges are described in detail below. However, the Commission notes that, as they are both longstanding physical structures specific to a particular location (that is mines), these refuges may not be typical of the kinds of refuges that would be available or appropriate in other communities or locations.⁷¹
- 8.56 Other evidence relates to ad hoc refuges — namely venues sought out by members of the community on 7 February, often in desperate circumstances.⁷² Some attempts to find ad hoc refuges were successful and saved lives. Other attempts were more fraught.
- 8.57 The Bushfire Cooperative Research Centre's *Victorian 2009 Bushfire Research Response Interim Report 2009* contained preliminary research results on refuges.⁷³ The report noted that refuges and shelters 'emerged as an important issue'.⁷⁴ It revealed that some in the community were unclear about the location of refuges. Residents of Kinglake and Kinglake West were recorded as believing that evacuation to firestations was advisable as these would be well defended. The report stated:

*In summary there appears to be evidence that many community members regard public buildings, ovals and emergency services facilities as safe places of refuge during a bushfire. There is some evidence of support for purpose-built community shelters in which residents can take shelter during a bushfire. Several of those interviewed reported that they were considering building personal shelters or 'bunkers' to protect them from bushfire.*⁷⁵

THE WOODS POINT REFUGE: A CASE STUDY

- 8.58 The Commission heard detailed evidence about the Woods Point adit, from Mr Kenneth Dwight, Leading Senior Constable at the Woods Point Police Station.⁷⁶ It provides a useful model of how a community might establish a refuge, draw up guidelines for its use and educate the community about the circumstances in which the refuge might be safely used.⁷⁷

- 8.59 The town of Woods Point has a permanent population of about 30, but during the fire season there are commonly tourists in the area.⁷⁸ The adit is a 50-metre-long shaft, with benches, chairs and basic supplies including water, fuel, food and medical equipment. It was used in the 1939 fires.⁷⁹ The adit has mesh and bolts, concrete culverts and an airlock between the concrete and the main tunnel. Thick felt blankets cover the entrance to the main tunnel. Water is pumped from a large dam in the adit, with a gravity-fed pump, and hosed onto the blankets.⁸⁰
- 8.60 The *Woods Point and Surrounding District Community Safety Plan*, which is a sub-plan to the Mansfield Shire MEMP, designates assembly areas and appoints a fire warden and a fire refuge warden. The fire refuge warden is responsible for opening the refuge when advised by police, or the control agency dealing with the fire, and is on standby on 'Code Red' days (designated as days with a fire danger index above 35). Steps are taken if a fire starts, or advances, within nine kilometres of Woods Point. Community members are advised to monitor the radio, activate their fire plans, satisfy themselves how long it will take them to reach the refuge and pass on communications via a telephone tree.⁸¹
- 8.61 Pamphlets giving directions for using the adit are distributed in local stores and throughout the Shire.⁸² The pamphlets are extremely useful and provide information that may not otherwise be accessible, particularly to visitors. Mr Dwight has also, on occasion, distributed a brochure designed for tourists to campsites in the area.⁸³

THE WALHALLA MINE AS A REFUGE: A CASE STUDY

- 8.62 Walhalla has a permanent population of approximately 12 to 20 people, although this number may swell by two or three hundred people during holidays and long weekends.⁸⁴ The Long Tunnel Extended mine in Walhalla is a tourist attraction, not far from the centre of town. It has long been used as a fire refuge (including during the 1939 fires), although it has not been formally designated as a refuge.⁸⁵
- 8.63 The Hercules Mining Company is the lessee of the mine, which is controlled by DSE. The mine is equipped with water, power and an emergency generator. The main chamber, deep underground, can accommodate 200 people. There is a canvass cover which may be placed over the entrance if necessary.⁸⁶
- 8.64 Mr Simon Seear, a CFA volunteer, whose family has a long connection with the town of Walhalla, gave evidence.⁸⁷ Mr Seear has secured permission to use the mine, as required, during fires, and he and other CFA members inform local residents and visitors about use of the refuge. Since the February 2009 fires, a CFA volunteer has prepared a flyer containing information about use of the refuge, which contains useful instructions and a map. It is intended to be made available to local residents and visitors.⁸⁸
- 8.65 Fire threatened the town of Walhalla on the afternoon of 7 February, coming within a couple of hundred metres of the main street. On the morning of 7 February, Mr Seear visited camp sites in the town and advised campers to leave the area, or to proceed to the refuge if they decided to stay and fire threatened the town. As the fire approached, CFA volunteers alerted residents to the approaching fire, met with them at the hotel in the main street and directed those who wished to take shelter to proceed into the mine. About 30 people (all but six people then located in the town) proceeded into the mine.⁸⁹
- 8.66 Mr Seear noted that:

The vast majority chose to head for the [mine]. Even people who I know in previous years had determined their bushfire plan was to 'stay and defend' took the opportunity to go underground.

...

The feedback I have since received from some residents has been to the following effect: "thank God someone took control and told us what to do". This to me was good news that our preparations were of significant use. We now want to put up a sign about use of the [mine] as refuge before the next fire season.⁹⁰

- 8.67 The Walhalla mine is a good example of a sensible local solution for an isolated town. It is clear that those in the town gained comfort from the planning that had taken place prior to the day. The mine served the town well.

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OTHER REFUGES

- 8.68 The Commission heard evidence of people using open spaces and public areas as ad hoc refuges on 7 February. This ranged from what might be described as the informal but organised approach adopted at Gallipoli Oval in Marysville, to truly ad hoc attempts to find shelter in places like the Kinglake West School.
- 8.69 Some lay witnesses were dismayed that they were unaware of any refuges in their area, or were not sure which venue was to be used.⁹¹ For example, Dr Lachlan Fraser had thought the Marysville golf course was a designated fire refuge. In the event, he did not have time to get to the golf course and ended up staying at the local football ground (Gallipoli Oval, Marysville) for the night.⁹² Some witnesses chose their own places of refuge.⁹³ A number of people congregated at Gallipoli Oval, in Marysville, on the evening of 7 February.⁹⁴ Mr Daryl Hull said he was aware the oval was a meeting point to be used if there was danger in the town.⁹⁵ A convoy left that oval as fire approached.⁹⁶
- 8.70 There were examples in which members of the community sought refuge in private properties, and of circumstances where the owners were not able to offer them protection.⁹⁷
- 8.71 Mr Paul Hendrie, Captain of the CFA Brigade in Kinglake, attested to the fact that there had been two fire refuges in Kinglake (Kinglake East Primary School and the Community Centre) but both had been decommissioned. Despite its decommissioning, a number of people gathered at the Kinglake East Primary School on 7 February. Some broke into the multipurpose room and sought refuge. Both buildings survived the fires.⁹⁸ Another witness took shelter at Kinglake West School. The school burned to the ground around him, and he decamped to a nearby oval.⁹⁹
- 8.72 Mr David O'Halloran was aware that the cricket ground at Yarra Valley Recreation Reserve was known by locals to be a refuge in Flowerdale, albeit unofficial.¹⁰⁰ He said it would be good to have a designated fire refuge.¹⁰¹ On 7 February, the Flowerdale pub became an informal venue where a number of people sought refuge.¹⁰²

MAV POSITION ON REFUGES

- 8.73 Mr Spence gave evidence on the position of MAV and 77 councils. He advanced a number of reasons why councils had decommissioned and generally not sought to designate public fire refuges, following the release of the 2005 Fire Refuges Policy:
- the inconsistency of designated public fire refuges with the 'stay or go' policy
 - the increased risk to personal safety unless designated public fire refuges are located close to communities or the people that move to them in the event of a fire
 - the implicit representation that, by designating a place as a public fire refuge, individuals will be safe from a fire, when safety may not be guaranteed
 - the failure or inability of previously existing public fire refuges designated by councils to meet the performance criteria mandated by the 2005 Fire Refuges Policy
 - the fact that a number of existing designated public fire refuges were at locations not recommended in the 2005 Fire Refuges Policy, such as schools or on private property
 - the cost of making buildings or other places compliant with the performance criteria in the 2005 Fire Refuges Policy, or of replacing buildings or other places with new compliant facilities
 - the exposure of councils to legal liability, and the refusal of the State to provide any immunity from such action.¹⁰³

- 8.74 Mr Spence also suggested that if the State specifically required the provision of designated fire refuges, MAV 'would hope that steps are taken and guidance would be given' in relation to:
- the types of communities and areas in which refuges should be established
 - who, and in particular which, expert agencies would determine their specific location
 - the number to be established in any community, municipality, region or in Victoria
 - the capacity of any particular designated public fire refuge
 - their standards for the design, construction, siting, operation and performance
 - responsibility for their establishment and management, during and after a fire
 - the provision of necessary funding
 - the immunities that are to apply.¹⁰⁴
- 8.75 Mr Spence emphasised Councils' limited financial resources. He suggested that any requirement that councils provide designated public fire refuges would be likely to raise issues unless adequate funding was provided.¹⁰⁵ Mr Spence suggested existing funds may need to be diverted from other activities such as family and community services or infrastructure services and raised the possibility of a rate increase in some municipalities.¹⁰⁶ He said the financial burden might fall most heavily on municipalities with the least resources 'being municipalities which are densely vegetated with numerous small and often disparate communities, and whose rate-paying populations are relatively limited'.¹⁰⁷
- 8.76 Despite concerns regarding costs, Mr Spence was unaware of the details of the Commonwealth's package of \$79 million under the Natural Disaster Mitigation Program.¹⁰⁸ The guidelines for grants under this scheme make specific reference to 'grass roots disaster resilience' projects, and to local government using funds to 'disaster proof' public infrastructure.¹⁰⁹
- 8.77 The MAV also expressed its concerns about liability and the possibility of litigation. Since at least 1998, councils have made representations to the State seeking immunity from tort liability in respect of provision, maintenance and promotion of refuges.¹¹⁰ Councils have an immunity in relation to aspects of their road management functions. However, they do not have an immunity in relation to the other core services they provide, such as child care, immunisation, maternal health and aged care.¹¹¹ Despite this concern, Mr Spence was not aware of a council being sued in relation to a MEMP, a Municipal Fire Prevention Plan, provision of assembly areas or provision of refuges.¹¹²
- 8.78 The Commission has not considered the issue of immunity (a legislative provision that prevents action being taken against a person, thereby removing the legal rights of a person who has suffered loss to take action) or indemnity (an agreement to be responsible for the financial liability for all or part of the damage that another party may suffer). It notes that it is possible that, if the designation of community fire refuges is undertaken by the State, questions of legal liability of councils may change. However, councils are likely to retain some role in advising on the selection of appropriate sites, and maintaining and operating designated community fire refuges. Issues of immunity, indemnity or funding are matters for the State to consider in developing its revised policy on refuges.
- 8.79 The position adopted by councils about refuges may be inconsistent with their existing obligations on emergency management. In accordance with section 20 of the Emergency Management Act, councils are obliged to prepare and maintain MEMPs. In relevant regions, councils are also required to prepare Municipal Fire Prevention Plans under section 55A of the *Country Fire Authority Act 1958*.¹¹³
- 8.80 The Commission rejects the suggestion made by Mr Spence that councils are mere followers who are effectively limited to implementation of State policy.¹¹⁴ Councils carry the core responsibility of preparing and executing MEMPs.¹¹⁵

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RISK AND REFUGE

8.81 The Commission notes the intention that MEMPs and Municipal Fire Prevention Plans be revisited as part of the implementation of the new IFMPF, but that work has not progressed to a stage where changes to those plans have been made. In particular, the IFMPF process has not yet touched on the question of refuges.¹¹⁶ Issues that arise in relation to township protection plans, neighbourhood safer places, and any future work on municipal emergency management planning, should all take place in the framework of the emerging IFMPF. An integrated approach should be adopted.

CFA POSITION ON REFUGES

8.82 Mr Rhodes, Manager, Community Safety, Research and Evaluation for the CFA, gave evidence about the CFA's position on refuges.¹¹⁷ He suggested that the OESC Guidelines (the 2005 Fire Refuges Policy) 'do not preclude the designation of locations as Fire Refuges'.¹¹⁸ Although this is technically correct, the evidence of Mr Rhodes suggests that the policy is heavily weighted against the designation of fire refuges. Mr Rhodes said:

If fire refuges were to be formalised as a bushfire safety option they would need to be purpose built to meet appropriate safety standards and be capable of accommodating large numbers of people and animals for unknown periods of time. The questions of who is responsible for managing the fire refuges and ensuring safety standards are complied with would also need to be addressed. Refuges would need to be audited on a regular basis to ensure that they continue to comply with safety standards.¹¹⁹

8.83 While the Commission accepts that new designated community fire refuges may need to be purpose built, it awaits the OESC review of the 2005 Fire Refuges Policy to ascertain the degree of retrofitting that may be required for existing buildings.

8.84 Mr Rhodes suggested that 'informal, local places of shelter' provide a 'viable alternative to official fire refuges'.¹²⁰ He said:

Nevertheless, informal places of shelter could either replace the need for formal fire refuges or complement them and perhaps make formal places of refuge more viable by reducing potential demand.¹²¹

8.85 In his oral evidence, Mr Rhodes distinguished between formal municipal refuges and informal places of shelter. He suggested that the characterisation of such places might alter the way people interpret and apply the 'stay or go' policy. He said the following:

... when those places have been used in the past, that's given people the idea that these could be formalised into places of shelter. Once you formalise them, they are no longer really serving the function that they served in these major fires because in the major fires they are effectively informal places of shelter. Once you designate them as a refuge, then you are changing the context in which people in that area might then make their decision about what to do. So, consequently, rather than be a place where people might go to if they are caught in the open, which is what they do during the fires, you are actually suggesting this is a place where the community could go, which is different from in fact what happens during the fires. Once you get to the point of saying this is a designated safe place that people could go to, you may be opening up the possibility of the whole community, for example, going to a particular location. Now, I'm not saying that's impossible and it is not impossible to manage, but it is a very different thing from what actually happened during these fires.¹²²

8.86 Mr Rhodes appears to suggest that the formal designation of a particular venue as a refuge or a safe place might inspire large numbers of people to go to that place. It is accepted that more people may be likely to attend a formally designated community fire refuge than another venue that has not been called a refuge or signposted as such. However, with the adoption of neighbourhood safer places (paragraphs 8.114 to 8.133), there would be more options available locally, some in closer proximity to a home that proves difficult to defend. In addition, individual households may choose privately identified safer places as their most viable option.

- 8.87 Mr Rhodes emphasised that ‘you would still need to make sure that people are making choices that are as informed as possible about what’s safe or safer than another place. So it would still require some advice or education of what constitutes a safer place’.¹²³

EXPERT OPINION ON REFUGES

- 8.88 Mr David Packham is adjunct Senior Research Fellow at the School of Geography and Environmental Science at Monash University. He provided his expert opinion on the use of fire refuges based on his experience in fire science and sociology of disasters.¹²⁴ Mr Packham is in favour of a new approach to refuges.¹²⁵ He advocated using existing structures and open spaces, selected and designated following assessment with the CSIRO House Survival Meter, developed by Andrew Wilson after the Ash Wednesday bushfires, which he referred to as the ‘Wilson meter’.¹²⁶

- 8.89 In his evidence, Mr Packham advocated giving more thought to using existing venues, given the rarity of bushfires:

*It occurs about every 30 years or so, and not over the entire state, so it seems a bit of almost overkill to me to build absolutely bomb proof fire shelters everywhere and to maintain them for about the 30 years that you need to maintain them ...*¹²⁷

- 8.90 Mr Packham expressed the view that the CSIRO House Survival Meter provides an adequate guide, such that if a building or structure reached 98 per cent ‘survivability’ on the meter, it would constitute an adequate fire refuge.¹²⁸ He explained that an assessment using ‘the meter’ takes approximately 30 minutes.¹²⁹

- 8.91 Mr Packham said that one could be very safe without meeting all of the requirements of the 2005 Fire Refuge Policy: ‘the actual scientific base behind these recommendations, I think if you look into the literature, is going to be extremely weak indeed’.¹³⁰

- 8.92 He suggested that a number of venues might constitute adequate refuges:

- some pubs are capable of providing adequate shelter, at least where there are people available to defend the building¹³¹
- a town shopping centre¹³²
- ovals and sporting grounds, if they are green and or do not have too much fuel around the outside¹³³
- fire stations (although Mr Packham also acknowledged that some fire stations had burned down during bushfires)¹³⁴
- public toilets, provided they are brick.¹³⁵

- 8.93 The Commission also heard from Mr John Nicholson, Director of Community Safety Services Pty Ltd.¹³⁶ He consults in fire and emergency risk management and planning. Mr Nicholson also has significant experience as a career officer with the CFA between 1967 and 1999.¹³⁷

- 8.94 Of the 2005 Fire Refuges Policy, Mr Nicholson said he found it ‘disappointing in that it provides no firm leadership on an issue critical to the safety of some Victorians and others’.¹³⁸ He said:

*[T]he policy itself is quite a tome and I prefer to see things done simply and I think that the wildfire management overlay... That provides guidance there for people... That’s already there.*¹³⁹

- 8.95 In his opinion, there is a need to provide refuges in some parts of Victoria, including areas where travellers and tourists regularly visit, such as the Great Ocean Road, or other isolated areas and communities.¹⁴⁰ Mr Nicholson said the responsibility for designating refuges should rest with the State, with advice from the CFA and in consultation with the community, municipality, Victoria Police and Victorian State Emergency Services.¹⁴¹

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- 8.96 In his view, suitable criteria for the selection of refuges could be drawn, by analogy, from those in the *Victoria Planning Provisions* (subsection 44.06–1 Building and Works, Wildfire Management Overlay) relating to water supply, access, building and works and vegetation.¹⁴² He accepted that application of these criteria to existing venues may require modifications to some buildings.¹⁴³
- 8.97 He suggested a number of existing venues that might constitute adequate refuges, such as hotels, beaches, ovals and sporting grounds.¹⁴⁴

REVISITING THE 2005 STATE REFUGES POLICY

- 8.98 Mr Rees and Mr Esplin accepted that the current policy on the provision of refuges needs to be revisited.¹⁴⁵
- 8.99 Mr John Gledhill, Chief Officer of the Tasmanian Fire Service and a Director of the Australasian Fire and Emergency Service Authorities Council, gave evidence that in his opinion (not formally that of the Council), fire refuges could be an option for some communities, noting that, for others, it may be impracticable.¹⁴⁶ He said that refuges are a 'far better and practical alternative to forced or directed evacuation and, with more work, can sit comfortably within the structure of Stay or Go'.¹⁴⁷ South Australia is also reconsidering its position on refuges.¹⁴⁸
- 8.100 The 2005 Fire Refuges Policy has not resulted in any new refuges being established in Victoria, and has raised questions about the few existing refuges that continue to be recognised. In the Commission's view, the current lack of refuges fails to provide for those who find themselves in danger when their plans fail, those who are overwhelmed by circumstances, those who change their minds and those who have no plan. The lack of refuges in Victoria also fails to assist people in areas threatened by fire who are away from their homes, such as employees, visitors, tourists, travellers and campers. Any option that reduces the risk to people in these circumstances warrants consideration by the State.
- 8.101 A new approach, which is capable of providing more options for the community, should be embraced. The new approach should shift the emphasis away from an exclusive focus on purpose-built structures acting as refuges, and permit the use of existing venues (including car parks, amenities blocks and dam walls) and open spaces (such as ovals, sporting grounds and race tracks).
- 8.102 A regime for designating community fire refuges should balance achievable criteria for their identification and operation, with the need to provide a range of options with appropriate minimum safety standards. The responsibility for such a regime derives equally from the State's responsibility for the life and safety of all its citizens, from the CFA's obligations to protect communities from the hazards of bushfires and from councils' obligations for local emergency management.¹⁴⁹
- 8.103 Individuals and households also have responsibilities to maintain a fire plan with a range of options. The designation of refuges will not exclude the use of privately identified safer places for individuals to seek refuge, as and when required, as these are quite different concepts.¹⁵⁰
- 8.104 The question of refuges has generated intense debate over a number of years in Victoria.¹⁵¹ The debate has been accompanied by policy statements that do not appear to have a firm foundation in fact (paragraph 8.38).
- 8.105 The MAV and the CFA have commonly advanced the view that the mere provision of fire refuges encourages people to leave their homes late, thereby placing them at risk.¹⁵² It is also often said, including in the 2005 Fire Refuges Policy, that the provision of fire refuges undermines or would be inconsistent with, the 'stay or go' policy.¹⁵³ The Commission is not convinced about the validity of these assertions, or that they have been adequately tested. No empirical evidence was provided by witnesses to support these claims.

- 8.106 For a number of years, the CFA and MAV have argued that designated community fire refuges should only be provided in rare circumstances, because of inherent risks in their selection and operation.¹⁵⁴ At the same time, however, both organisations have advocated the use of ‘local informal places of shelter’ selected by members of the community (alone or in groups).¹⁵⁵ It is not clear why CFA and MAV suggest that the State should not designate ‘safer’ places, but that individuals should be encouraged to do so. It would seem more logical that selection of places to shelter during the passage of a fire front be undertaken by an agency of the State, with expertise in fire behaviour and emergency management. The Commission believes that the task should be undertaken in a partnership involving the State, the CFA, local government and residents, taking account of the experience and perspectives of each party, rather than being left to individuals.
- 8.107 It is accepted that, regardless of the system for selecting and operating formally designated community fire refuges, some people may, on occasion, have to abandon a plan to travel to a designated refuge, and opt for another venue. That may be a venue that has been designated as a refuge, or it may not, depending on the nature of the emergency and the options available to those affected. This is a question of necessity, and should not drive the central policy, which should be focused on the designation of refuges according to achievable criteria for their identification and operation, balanced with the need to provide a range of options.
- 8.108 Mr Nicholson expressed a view that the CFA should, when possible, provide resources to assist in the defence of a designated community fire refuge whenever such refuges may be directly impacted by fire.¹⁵⁶ Mr Packham said that once the initial attack by the CFA is exhausted, it should set up protection in safe areas to defend refuges.¹⁵⁷
- 8.109 The CFA should give active consideration to providing resources to assist the defence of formally designated community fire refuges during the passage of a fire. This may not always be possible, and decisions will be made in light of all the circumstances pertaining to the allocation of resources to suppress a particular fire. Nevertheless in the Commission’s view, the existence of known local places where people are likely to congregate heightens the possibility of some protection being available from the fire services. The State accepted this in its written submissions.¹⁵⁸
- 8.110 Further, where possible, providing a means to actively protect designated community fire refuges, in the form of a water source, hoses and firefighting equipment, provides those sheltering there with the best chance of survival, even when CFA resources are not present.

RECOMMENDATION 8.3

The CFA give priority where possible to provide resources to assist in the defence of designated community fire refuges and neighbourhood safer places at times when they are likely to be in use.

REVIEW OF THE 2005 FIRE REFUGES POLICY

- 8.111 In its submissions, the State indicated that the OESC and the CFA would review the 2005 Fire Refuges Policy and, in so doing, would consult widely, including with MAV.¹⁵⁹ The Commission has neither heard evidence as to the scope of the OESC review, nor its expected date of completion. In oral submissions, it was suggested that the development of new standards to replace the 2005 Fire Refuges Policy ‘is something that realistically will take a couple of months’.¹⁶⁰
- 8.112 The State urged that any recommendations about designated or formal refuges should await the outcome of the OESC review in order to avoid ‘unrealistic community expectation that fire refuges will be available for the next fire season’.¹⁶¹
- 8.113 The Commission notes that the State proposes to identify neighbourhood safer places and urges swift implementation of this concept, as well as the recommendations of the OESC review particularly in fire-prone areas.

8 RISK AND REFUGE

A NEW CONCEPT — NEIGHBOURHOOD SAFER PLACES

8.114 In its submissions to the Commission the State recognised that there must be ‘additional options’ for people who are unable to shelter in a prepared home or are caught in the open during a fire and submitted that ‘consideration should be given to incorporating fire refuges into bushfire policies as places of last resort’.¹⁶² But it asserted that ‘it will not be possible for this to occur in time for the next bushfire season’.¹⁶³ In oral submissions, Mr Allan Myers QC reiterated as follows:

*We say this very very clearly and plainly. It will not be possible for refuges to be established before the next fire season ... [t]here will have to be careful consideration of the standards that apply to a refuge.*¹⁶⁴

8.115 The State urged that any recommendations concerning formal designated fire refuges be delayed, to avoid unrealistic expectations that fire refuges will be available for the next bushfire season, to ensure that adequate time is given to establishing appropriate standards for refuges and addressing other key issues (such as the number of people who might use a refuge and the availability of parking), and to undertake community education about any new arrangements.¹⁶⁵

8.116 The State suggested that the Commission should consider other options such as ‘safer places in a neighbourhood, informal places of shelter and township protection plans’.¹⁶⁶ In this context, it indicated that the State will ‘for the next bushfire season’ start identifying appropriate sites as neighbourhood safer places and will ‘educate the public about the appropriate use of those places’.¹⁶⁷

8.117 Following the conclusion of the hearings, the State supplied a document titled *Further Material of the State of Victoria*, documentation concerning township protection plans and a further document, *Country Fire Authority: Business Case for Community Safety Preparedness Programs for 2009–2010* (July 2009).¹⁶⁸ The Business Case reveals that considerable work has been undertaken by PriceWaterhouseCoopers, at the request of the CFA, to develop a business case and identify funding needs for community safety programs for the next fire season, including township protection plans and neighbourhood safer places.¹⁶⁹

8.118 The State indicates it could be rolling out a program of township protection plans in 50 towns by next bushfire season, and could commence identifying neighbourhood safer places.¹⁷⁰ The Commission commends this action, suggest that the sites be identified based on bushfire risk.

8.119 The neighbourhood safer places program will assist communities or groups to identify safer places in their neighbourhood. The State proposes that a neighbourhood safer place:

*... will provide a space which is a place of last resort for individuals to access and remain in during the passage of fire through their neighbourhood, without the need to take a high risk journey. They are intended to provide a place of relative safety – they may, for example, be a house in the street built of brick rather than wood.*¹⁷¹

8.120 Documents provided by the State indicate that:

- The neighbourhood safer places program is likely to be a partnership arrangement among the CFA, local government and local communities.¹⁷² The State will develop, and the CFA will administer, the program with local participation and engagement.¹⁷³
- The program will build on existing programs like Community Fireguard and be integrated into township protection plans, but will not be dependent upon these plans.¹⁷⁴
- Areas of highest risk will attract attention as a priority, including ‘interface areas’, bush and parks areas and the highest bushfire risk localities. Neighbourhood safer places will be identified in high risk communities where either the pilot township protection plans are put in place, or there is an existing fire prevention and community engagement process, such as the Community Fireguard.¹⁷⁵ This is a sound approach.

- 8.121 There is promise in the State's proposal for neighbourhood safer places. While not fully developed in its submission, the concept appears to have a number of features in common with both formal and informal refuges. However, it also appears from the State's submissions that the neighbourhood safer place might be a broader notion than a refuge. For example, reference is made to taking shelter in a neighbour's home. The Commission suggests that full development of the concept should separate those refuges or 'safer places' designated and organised by government, and the private arrangements of individuals, as laid out in paragraph 8.25.
- 8.122 The criteria for neighbourhood safer places, and the way in which they might operate, were not explored in the evidence of the State's witnesses. However, it is noted that the concept of neighbourhood safer places is consistent with the approaches to refuges advocated by Mr Packham and Mr Nicholson, and is not inconsistent with the evidence of Mr Rhodes.
- 8.123 The Commission agrees with the State's position that a 'one size fits all' approach to fire refuges is not appropriate for all communities.¹⁷⁶ Each community faces different risks and has its own needs. The evidence suggests that a more creative approach to refuges is desirable, so that a broader range of venues available in, and suitable for, local communities can be used to provide shelter to some residents.
- 8.124 The submissions of the State suggested:
-
- Informal, local places of shelter provide a viable alternative to formally designated refuges and also overcome some of the issues associated with official fire refuges including the need for travel to these sites and management and implementation issues.*¹⁷⁷
-
- 8.125 The intention appears to be that neighbourhood safer places will be identified by the State, and that the CFA will assess and manage them. In contrast, local informal places of shelter are described in a manner that suggests they are to be self selected by individuals. Accordingly, it appears that the State proposes a three-tier system comprised of:
- (1) designated refuges (identified and managed pursuant to revised criteria)
 - (2) neighbourhood safer places (identified and managed pursuant to the criteria set out in its further submissions)
 - (3) informal, local places of shelter (referred to at some length in the submissions of the State and in the evidence of Mr Rhodes).
- 8.126 This is broadly consistent with the Commission's proposed approach to characterising and identifying refuge options, as outlined in paragraph 8.25.
- 8.127 Though councils are not mentioned, the Commission urges that they be involved, particularly as is necessary to ensure conformity with MEMPs and Municipal Fire Prevention Plans. It is expected that councils would also be involved in assisting to identify suitable locations, and in communicating the location of neighbourhood safer places to the community. Consideration should also be given to whether councils will have a role in the ongoing maintenance of neighbourhood safer places.

8 RISK AND REFUGE

8.128 The *Further Material of the State of Victoria* document sets out what the State describes as the important features of a neighbourhood safer place. Such places:

- are relatively close to, or within, the neighbourhood
- are well known to the neighbourhood and highly accessible
- are in an appropriate site with managed vegetation
- offer protection from radiant heat
- lessen the threat from ember attack, high smoke concentration and other elements arising from the passage of a bushfire through a neighbourhood
- if they are a building would meet the relevant construction standards
- have access to water and fire fighting equipment
- have a level of organisation to give a degree of confidence to those seeking shelter from the onset of bushfire
- are in locations that will be recorded in the Municipal Fire Prevention Plans and MEMPs and will be communicated to the local community.¹⁷⁸

8.129 The criteria for identifying neighbourhood safer places appear sound. They are similar to the alternative approach to the current criteria for designating fire refuges, suggested by Mr Packham and Mr Nicholson. The manner in which the criteria have been presented tends to suggest that safer places will often be a building or structure, but not necessarily so. This is a sound approach and, again, is consistent with the expert opinion given in evidence.

8.130 The Commission would also propose the inclusion of a criterion that the CFA will, where and when possible, provide resources to assist in the defence of neighbourhood safer places. This position was endorsed by the State in its written submissions and is considered by the Commission to be an important component of any strategy that promotes safer places in neighbourhoods.¹⁷⁹

8.131 The Commission has not heard detailed evidence on the tools that might be suitable to assess risk and determine appropriate standards for neighbourhood safer places. However, in developing the criteria for neighbourhood safer places the State should consider tools such as those referred to by the expert witnesses.

8.132 A matter that requires further consideration is nomenclature. In the proposed approach, the distinctions between each of the categories (designated fire refuges, neighbourhood safer places and informal fire refuges) tend to fall away. Evidence in Chapter 4, illustrates the confusion that can occur with unnecessarily complex classifications, and the benefits of clearly communicating the purpose and use of terms used to describe an emergency procedure. As noted in paragraph 8.27, the Commission intends to consider terminology for a number of fire-related matters in future hearings.

8.133 The Commission would also reiterate its view that, even with the introduction of neighbourhood safer places, a third tier of 'privately determined safer places' will continue to be used and should therefore be considered as part of the range of options. Such places are identified by individuals and carry no imprimatur from the State. They are not governed by the operation of any set criteria, but ideally are selected by individuals on the basis of the information available to them about what may present a safer option in the circumstances prevailing during a bushfire. Individuals will turn to such places at short notice, out of necessity, when all other options, including the capacity to get to another type of refuge, fail. However, they should be predetermined in personal or household fire plans, as non-preferred options so that people have alternatives if they are caught in extremely dangerous fires.

RECOMMENDATION 8.4

The State replace the *2005 Fire Refuges in Victoria: Policy and Practice* following its current review by the Office of the Emergency Services Commissioner.

RECOMMENDATION 8.5

The State promulgate criteria for the identification and operation of neighbourhood safer places, and involve councils and local communities in their development and implementation as appropriate.

RECOMMENDATION 8.6

The State to have commenced progressively identifying, establishing and advertising designated community refuges and neighbourhood safer places, giving priority to areas where bushfire risk is identified as high.

RECOMMENDATION 8.7

Municipal councils record the location of designated community fire refuges and neighbourhood safer places in Municipal Fire Prevention Plans and Municipal Emergency Management Plans, and inform residents and visitors about their use and location.

RECOMMENDATION 8.8

The State to have developed uniform signs for designated community fire refuges and neighbourhood safer places in Victoria.

RECOMMENDATION 8.9

The CFA maintain an up to date, state-wide list showing the precise location of all designated community fire refuges and neighbourhood safer places, and provide the list to DSE, Victoria Police, the State Emergency Service, the Municipal Association of Victoria, the Office of the Emergency Services Commissioner, and the Victorian Bushfire Information Line.

RECOMMENDATION 8.10

The State report to the Commission on the results of the implementation and effectiveness of its township protection plan program and neighbourhood safer places program.

8

RISK AND REFUGE

SCHOOLS AND THE SAFETY OF CHILDREN

- 8.134 The Minister for Education is responsible for school education in Victoria. The Department of Education and Early Childhood Development (DEECD) operates and oversees all government schools. Nearly one in three students in Victoria is educated in a non-government school. These schools are overseen by the Association of Independent Schools of Victoria or the Catholic Education Commission of Victoria. All schools are registered by the Victorian Registration and Qualifications Authority and undergo regular reviews to be eligible for re-registration. Improvements to bushfire preparedness could be built into the registration requirements for government and non-government schools alike.¹⁸⁰
- 8.135 The Minister for Children and Early Childhood Development has responsibility for children's services, which are services providing care or education for four or more children under the age of 13, in the absence of their parents or guardians. This includes kindergartens, child care centres, preschools and early learning centres. Licensees of children's services include councils, incorporated associations, community services organisations, school councils, some independent schools and commercial entities. The Secretary of DEECD is responsible for licences and their requirements.¹⁸¹
- 8.136 Three government schools (Strathewen Primary School, Marysville Primary School, Middle Kinglake Primary School) and three kindergartens (Kinglake Kindergarten, Flowerdale Kindergarten and Marysville Kindergarten) were destroyed by fire on 7 February.¹⁸² This begs the question: 'what would have happened had these fires occurred on a Friday?'
- 8.137 DEECD is commended for moving quickly and decisively in reviewing its existing policies, assessing refuges at schools in bushfire prone areas, and announcing and implementing a changed policy approach.

THE POLICY FRAMEWORK AS AT 7 FEBRUARY

- 8.138 Bushfire policies for schools in Victoria, as at 7 February, were less than ideal.¹⁸³ The need for a policy for schools was identified in the Ash Wednesday Report.¹⁸⁴ Mr Rees recalled that, during the Ash Wednesday fires, children were dropped off by school buses in dangerous circumstances. He said 'it is certainly an area that needs some work'.¹⁸⁵
- 8.139 DEECD now has responsibilities under the *Emergency Management Manual Victoria* for the development of a statewide emergency management policy, including guidelines for government schools.¹⁸⁶ Mr Tony Cook, Deputy Secretary for the Office of Children and Portfolio Consolidation, indicated that materials developed by DEECD for government schools are also available to non-government school authorities for their consideration.¹⁸⁷ As at 7 February, a range of policies and procedures were in place for emergency management and bushfires that affect schools:
- the *Victorian Government Schools Reference Guide* requires all school principals to develop Emergency Management Plans for each school, and for such plans to be tested and reviewed annually. This is effectively a requirement to self audit¹⁸⁸
 - the *Managing Schools Emergencies Manual*¹⁸⁹
 - the *Bushfire Safety Checklist* (and associated explanatory notes) requires principals to ensure that, prior to the fire season, the school's Emergency Management Plan is reviewed, the school's 'stay or go' plan is tested, the school bus plan is reviewed, fire hazards around the school are reduced, fire protection equipment is present, and there is a continuous supply of water¹⁹⁰
 - the Bushfire Preparedness for Schools intranet site.¹⁹¹
- 8.140 In preparation for the 2008–09 bushfire season, on 28 October 2008, DEECD circulated to all schools an alert requesting schools to review their *Bushfire Safety Checklist*. In light of the forecast extreme fire danger for 7 February, the *Bushfire Safety Checklist* was again circulated to government schools on 6 February.¹⁹² DEECD's decision to highlight the need to take measures during the fire season, and in particular prior to 7 February, was sound.

- 8.141 The position in relation to children's services was less rigorous. A document titled *Emergency Procedures – Guidelines for Kindergartens and Childcare Centres* was developed in 1998 to assist children's services to develop emergency procedures in the case of fire. However, adherence to the guidelines is not a requirement of the current licensing regime for the services.¹⁹³
- 8.142 As at 7 February, there was no state-wide policy requiring government schools to either evacuate, close schools or use a fire refuge in event of fire. During 2008, for example, there were a number of Total Fire Ban (TFB) days, but no schools closed for that reason. In particular, it is noted that no schools closed on the TFB days on 5 and 6 February 2009.¹⁹⁴

CHANGES MADE SINCE THE FIRES

- 8.143 Since 7 February, DEECD has implemented significant policy changes:
- a new procedure for school closures on TFB days and days of extreme fire risk
 - a safety audit of refuges in schools in the Eastern and Northern Metropolitan Regions
 - provision of the *Bushfire Safety Checklist* to children's services.¹⁹⁵
- 8.144 DEECD's Regional Directors now determine whether to close schools at risk of fire threat, on the advice of the CFA and emergency services. Schools have been closed in a number of regions on TFB days since 7 February.¹⁹⁶ For example, on 27 February, 189 government schools and 221 licensed children's services were closed and, on 3 March, 313 government schools and 264 licensed children's services were closed.¹⁹⁷
- 8.145 Mr Cook indicated the DEECD had not received negative feedback about the large number of school closures in February and March.¹⁹⁸ There may be debate about the merits of closing schools on TFB days. It has an impact on working parents, and may create a situation in which children are left at home alone. It is possible that DEECD will receive different feedback from parents during the next bushfire season, particularly if there is a large number of school closures in that season. DEECD may need to revisit its policy in light of any such feedback, but at this stage, it appears the community has welcomed the revised approach.
- 8.146 DEECD also commissioned a report by the Victorian Managed Insurance Authority to investigate the fire safety levels of refuges in a number of its schools.¹⁹⁹ The results were troubling. Seven were assessed as unacceptable; a further seven were assessed as 'marginal'. The remaining 18 were assessed as acceptable, subject only to the completion of high and urgent priority recommended works. Only one of the 18 acceptable refuges did not require high or urgent priority works.²⁰⁰ Rectification works were identified and graded according to urgency.²⁰¹ Mr Cook said DEECD is costing the works required. School principals have been provided with a copy of the report relating to the refuge at their school.²⁰²
- 8.147 On 24 February, DEECD provided children's services with the guide to *Fire Readiness in Rural and Regional Children's Services* and the *Bushfire Safety Checklist for Victorian Children's Services* and recommended they review their plans in light of these documents.²⁰³ Mr Cook accepted that children's services (kindergartens, early learning centres and childcare services) may face additional challenges because the venues from which they are operated are less homogenous than schools, and they are operated by a varied group of entities. He also accepted that it is more likely that children's services will need to identify nearby refuges, rather than being able to perform adequate rectification works onsite.²⁰⁴ He said DEECD might consider making compliance with the *Bushfire Safety Checklist* a licence requirement.²⁰⁵ The Commission suggests that DEECD give this active consideration, as one way of providing greater protection to very young children.
- 8.148 DEECD has been actively considering future policy options. One such option was the prospect of auditing the Emergency Management Plans of schools in higher risk areas.²⁰⁶ In its written submissions, the State said it was now preparing a policy to the effect that School Emergency Management Plans would be certified twice yearly through the School's Compliance Checklist.²⁰⁷ The Commission welcomes this change, and suggests that it would be prudent to formally audit the plans of schools in bushfire prone areas prior to the next fire season.

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RISK AND REFUGE

- 8.149 Mr Cook said DEECD's overarching aim is to ensure that schools never reach a situation in which children and staff are forced to shelter in a school during the passage of a firefront. School closures, or early evacuation, are the primary focus of the policy. However, if a situation does arise where there is insufficient time to move children to a safer area, improved onsite refuges (following rectification works) should offer additional protection.²⁰⁸
- 8.150 In the context of the State's 'stay or go' policy, DEECD has essentially adopted an approach of leaving early, through its policy of school closures on TFB days and days of extreme fire risk. As with households that plan to leave early, schools may find themselves in a situation in which a fire occurs on a day when students are in attendance. As such, schools need a 'Plan B' in the same way that households need a 'Plan B'. DEECD, and non-government school authorities, are urged to ensure that schools in bushfire prone areas have either a certified refuge or a neighbourhood safer place for the students to shelter from the fire.
- 8.151 In the same way that householders need rudimentary fire-safety skills, teachers, and those responsible for the care and safety of young children and students, need emergency response skills in the event of a bushfire or other natural hazard. The Victorian Registration and Qualifications Authority is urged to ensure that government and non-government schools are audited as part of re-registration requirements to ensure they have adequate bushfire safety procedures in place.
- 8.152 The Commission notes the matters discussed above, and that DEECD is in the process of reviewing a number of its policies and processes, to continue to develop bushfire preparedness and safety strategies for schools and children's services. The ongoing work of DEECD is encouraged.

RECOMMENDATION 8.11

The Department of Education and Early Childhood Development complete a review of all refuges in all schools in areas at risk of bushfire.

RECOMMENDATION 8.12

The Department of Education and Early Childhood Development give priority to rectification works to refuges identified in the Victorian Managed Insurance Authority report.

RECOMMENDATION 8.13

The Department of Education and Early Childhood Development review the adequacy of bushfire fire protection measures in children's services facilities including kindergartens, child care centres, preschools and early learning centres.