



2013 Tasmanian Bushfires Inquiry

Volume One

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All legislation referred to in this Report,
unless otherwise stated, is Tasmanian.

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LIST OF RECOMMENDATIONS BY PART

PART D

1	That Tasmania Fire Service supports the relevant authorities to continue developing methodologies to forecast and simulate fire risk.
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PART E

2	That police and other emergency service agencies establish and maintain effective recording systems for emergency operations.
3	That if a sound business case is developed, the Emergency Information Management and Sharing Project be supported.
4	That the role and expected duties of the State Controller be clearly defined in the Emergency Management Act 2006.
5	That the State Controller (or an alternate if they are not available) be expected to personally take an active role in controlling and coordinating response and recovery operations, depending on the nature and scale of the emergency, and until other identified arrangements for ongoing operations are established.
6	That in multi-agency response and recovery operations, arrangements be made so it is unambiguous who is in charge of these operations.
7	That a structure and facilities be established for the State Controller or other person managing multi-agency response and recovery operations.
8	That the Government reconsider the current position on emergency declarations in the Emergency Management Act 2006 and the Act is amended to provide: <ul style="list-style-type: none"> • a graduated scale of emergency declarations • the ability to make a declaration when an emergency has occurred, is occurring or is about to occur • the ability for the State Controller (or whatever the person in overall control of response and recovery operations is called) to make one or more declarations • a declaration to enable access to all emergency powers.
9	That the Tasmania Emergency Management Plan enable, and all organisations with a role in emergency management activate, emergency plans at lower threshold events to practice their arrangements and achieve a 'hot start' in escalating events.
10	That all agencies and the Government support moving to an integrated communications technology for police and the emergency services.

11	That police and other emergency services examine options for achieving radio interoperability between them in the absence of an integrated radio system.
12	That Tasmania Fire Service establishes suitable systems and practices for recording fire management objectives and tactics.
13	That Tasmania Fire Service examines options for developing and issuing fire management objectives and tactics from Incident Management Teams in a more timely way, including 'quick' plans.
14	That Tasmania Fire Service and its partner agencies establish a means of monitoring and reviewing the effectiveness of centralising the location of Incident Management Teams.
15	That Tasmania Fire Service considers measures to bring local knowledge into Incident Management Team operations.
16	That Tasmania Fire Service reviews its position on fire ground management to determine whether a unified command model at the fire ground should be adopted.
17	That Tasmania Fire Service reviews its position on using local experienced officers on the fire ground in the command model in a structured and systemic way.
18	That fire agencies continue to develop their predictive modelling capability for use in actively managing fires.
19	That Tasmania Fire Service reviews the communication systems used for all emergency management operations, ensures operators are qualified, and ensures there is appropriate accountability.
20	That Tasmania Fire Service, Forestry Tasmania, and Parks and Wildlife Service have a process for ensuring fire strategy and tactics are appropriate and remain focussed.
21	That Tasmania Fire Service ensures that planning for active fires includes a proactive approach wherever possible.
22	That Tasmania Fire Service considers adopting a primary tactic of an aggressive first attack on fires.
23	That Tasmania Fire Service critically reviews the operation of the Six Operational Priorities to determine whether they are appropriate and effective.
24	That Tasmania Fire Service considers what adjustments may be necessary to the promotion and use of the Six Operational Priorities to ensure plans are suitable for the circumstances of each fire.
25	If it is considered more information is required on action to suppress the fires in Dunalley and why fire operations did not continue, the Department of Justice should conduct an independent examination of this matter.

26	That Tasmania Fire Service reviews operational practices to ensure there is continuity of fire operations when fire suppression action is required.
27	That Tasmania Fire Service reviews its integration of rural local knowledge and volunteer brigades into fire operations, develops and maintains appropriate strategies, and aims to be a best-practice fire service in this regard.
28	That Tasmania Fire Service reviews its approach to blacking out and mopping up, including its policies, operating procedures and training.
29	That Tasmania Fire Service reviews its approach to fire management operations at night, and develop and effectively implement unambiguous policy and operating procedures.
30	That bushfire agencies evaluate the use and effectiveness of fixed wing water bombing aircraft.
31	That bushfire agencies develop procedures for the automatic activation of aircraft to fires at pre-determined trigger points on high fire risk days.
32	That bushfire agencies develop, implement and maintain air operations procedures.
33	That Tasmania Fire Service establishes sufficient resources and expertise to research, develop, implement and review its policies and operations.
34	That Tasmania Fire Service documents and publishes its operational policies and procedures so they are accessible to and suitable for operational personnel.
35	That Tasmania Police ensures planning for emergency operations includes a proactive approach wherever possible.
36	That Tasmania Police reviews its Emergency Traffic Management Points policy; and develops a multi-agency policy in the emergency management plans for road closures and traffic management, including clarity in decision making, coordination and sufficient operational flexibility.
37	That arrangements are made for and appropriate pre-planning occurs to effectively implement the policy on road closures and traffic management.
38	That a state-level policy on evacuations be developed in the emergency management plans, including specific requirements for vulnerable people and guidelines for its implementation.
39	That qualifying the evacuation authority in section 47 of the Fire Service Act 1979 be considered — by exempting those people with a pecuniary interest in a property from a directed evacuation where it is reasonable for them to remain.
40	That arrangements are made and appropriate pre-planning occurs to effectively implement the policy on evacuation.
41	That Tasmania Police be identified as the lead agency on evacuations.

42	That decisions to open Community Fire Refuges and evacuation centres be coordinated with Tasmania Police.
43	That emergency management plans specifically include processes for effectively engaging with local communities and using community resources, including volunteers.
44	That a review be conducted of the resource capacity and capability to provide effective and efficient emergency operations, including approved improvements.
45	That further options to appropriately supplement the resources available for emergency management operations be examined.
46	That the police and other emergency service organisations discuss their resource issues for emergency operations with the Government.
47	That action be taken as a priority to resolve any legal issues on mutual assistance arrangement for fire services.

PART F

48	That the state level structural arrangements for managing recovery operations are reviewed.
49	That a standing plan is developed to manage the transition from immediate recovery to medium and long-term recovery, and arrangements are made to ensure this plan can be effectively implemented in a timely way.
50	That the State Special Emergency Plan–Recovery and the emergency management structure for recovery be reviewed.
51	That appropriate plans are made to mobilise resources quickly to re-open roads affected by emergencies.
52	That a public information plan be developed as a part of the State Special Emergency Plan–Recovery, for implementation in the immediate recovery phase.
53	That evacuation centres and other centres have plans and arrangements for electrical power redundancy.
54	That evacuation centres and other centres have a standard operating procedure for communications.
55	That the role of Red Cross in emergency management plans and procedures for the activation of Red Cross be reviewed.
56	That the Department of Infrastructure Energy and Resources consult Aurora Energy on the use of wooden poles for overhead infrastructure with a view to mitigating the risk in bushfires.

57	That the Government consider whether it should discuss options for greater mobile phone coverage and redundancy in areas of high risk in emergency situations where there are presently telecommunications limits.
58	That emergency management plans recognise the need to provide priority access to areas of emergency operations for critical infrastructure providers.
59	That the State Emergency Management Committee ensures that a program of debriefing on recovery issues is completed by all relevant agencies and organisations, and detailed plans and operating procedures are established ready for implementation.
60	That the State Emergency Management Committee examine whether there are any legal issues associated with continuing recovery operations where the overarching emergency management arrangements have ceased.
61	That the plans for social recovery be reviewed, and plans and procedures are established ready for implementation.
62	That suitable facilities are established from which to effectively control and coordinate immediate recovery operations.
63	That emergency management plans specifically include processes and resources for effectively engaging with and using local communities, including volunteers.

PART G

64	That the State Fire Commission finalise its position on the Tasmania Bushfire Safety Policy without further delay.
65	That the State Fire Commission structures its Tasmania Bushfire Safety Policy so policy outcomes are identifiable and progress in achieving outcomes can be evaluated.
66	That the Tasmanian Emergency Management Plan includes a comprehensive all-hazards communications policy and plan.
67	That Tasmania Fire Service actively uses predictive modelling to design emergency communications for communities threatened by bushfire, unless there is a compelling reason for not doing so.
68	That Tasmania Fire Service ensures that the priority on warning communities at risk of active bushfires is not confined to when bushfires are burning out of control.
69	That the State Emergency Management Committee makes timely decisions and resource commitments on the appropriate use of social media in emergency management.

70	That the State Emergency Management Committee makes arrangements to actively manage the use of social media in the community during an emergency, to avoid negative consequences for emergency operations.
71	That Tasmania Fire Service and Tasmania Police review their use of modern forms of communication with the community, including social media, and commit resources to fully use this capability where appropriate.
72	That Tasmania Fire Service reviews its approach to communicating with communities threatened by bushfire and consider the matters referred to in this Report.
73	That Tasmania Fire Service promotes a structured approach to research across Australia, to provide a shared understanding and the capacity to benchmark and judge performance.
74	That Tasmania Fire Service develops a research base from which to inform the design of communication campaigns for communities threatened by bushfire.

PART H

75	That a process be established for the timely implementation of approved recommendations from the 2009 Victorian Bushfires Royal Commission.
76	That an exercise program — to establish and maintain an acceptable state of readiness for agencies and organisations required to be involved in emergency operations — be developed and implemented.
77	That training and development of personnel to establish a suitable state of readiness, be included in the recommended review by Tasmania Police of its approach to emergency management.
78	That membership of the State Emergency Management Committee, and other processes to link in appropriate agencies and organisations to emergency management, be included in the recommended review of the emergency management arrangements.
79	That an accountability process be established for managing improvement in the emergency management arrangements, including annual State of Readiness Reports by relevant departments and agencies and on the overall emergency management arrangements.

PART I

80	That the Government take into account demographic change in its assessment of the consequences of climate change on emergency events.
81	That the State Emergency Management Committee considers structuring the Tasmania Emergency Management Plan in a way that provides more specific guidance, commitment to and accountability for action to be taken.
82	That the State Emergency Management Committee determine suitable risk management tools, such as the Bushfire Risk Assessment Model, and encourages their use in assessing bushfire risk in a consistent manner.
83	That a specific risk prevention and mitigation advisory body be established for the State Emergency Management Committee.
84	That the resources available to the Parks and Wildlife Service, to manage bushfire risk following the recent increase in land under its tenure, is reviewed.
85	That the Government considers whether a peak body should be established, with authority to effectively implement a bushfire mitigation plan.
86	That the State Fire Management Committee considers developing a structured, systemic and proactive bushfire hazard reduction program with municipal councils and Tasmania Fire Service; and advises the Government on any legislative or other changes required to implement such a program.
87	That the State Emergency Management Committee includes in its planning, the development of contingency emergency management plans for areas of high risk due to local conditions.
88	That the State Fire Management Committee note the decline in machinery and skilled operators from the forestry industry in the private sector and determines how this reduction in fire management capability can be addressed.
89	That the legislation and enforcement arrangements are reviewed to ensure there are suitable offences and penalties, investigation and enforcement capabilities, and a rigorous approach is taken to breaches of the law.
90	That Tasmania Fire Service or another suitable agency provides information to the community which shows, in simple form, the legislation applicable to approvals for lighting fires on private property and the various relationships between that legislation.

91	<p>That Tasmania Fire Service conducts a review of the fire permit system in the Fire Service Act 1979, and implements change to improve the efficiency and effectiveness of the system by:</p> <ul style="list-style-type: none"> • considering whether it is appropriate to authorise persons or organisations to conduct fuel reduction burning during a permit period • providing a better match between the period, area and fire risk • maintaining a timely and efficient process for issuing permits • naming the period in a way that draws attention to bushfire risk • establishing a reporting and accountability process.
92	That the Government actively support the timely development and implementation of an ongoing Strategic Fuel Management Plan.
93	That the Strategic Fuel Management Plan includes measurable targets and they are actively monitored and reported on to the community.
94	That the Government makes land use planning and building construction to prevent and mitigate bushfire risk a high priority and establishes a means to progress improvements in this area, such as a designated body or group, as soon as possible.
95	That a bushfire community education and information strategy be professionally developed and coordinated across the fire authorities by Tasmania Fire Service.
96	That the State Emergency Management Committee develops and coordinates a whole-of-government community resilience strategy for emergencies in a form that can be practically implemented, as a priority.

PART J

97	That Tasmania Police conducts a review to ensure emergency management is treated as a priority and a core function throughout the organisation, including the development of contemporary capabilities, and is supported by an appropriate culture.
98	That Tasmania Police establishes a section within its structure with responsibility for developing and maintaining contemporary expertise in emergency management, progressing innovation, assisting organisational change initiatives and supporting its responsibilities in state emergency management arrangements.
99	That Tasmania Police develops and implements a program for examining emergency management arrangements and facilities in Australia.
100	That the Department of Justice conduct an independent review to develop a suitable model for integrated and interoperable emergency management arrangements in Tasmania.
101	That following any review, the Emergency Management Act 2006 be amended.

PART K

102	That resources are committed to developing and implementing approved reforms to the emergency management arrangements.
103	That an independent means of monitoring and reporting on the implementation of approved recommendations is established.

LIST OF ACRONYMS BY PART**THROUGHOUT**

TASPOL	Tasmania Police
TFS	Tasmania Fire Service

PART C

PPRR	prevention, preparation, response and recovery
TEMP	Tasmanian Emergency Management Plan 2009

PART D

AFAC	Australasian Fire and Emergency Service Authorities Council
C-Haines Index	Continuous Haines Index
FFDI	Forest Fire Danger Index
FFDR	Forest Fire Danger Rating
SDI	Soil Dryness Index

PART E

CAD	Computer Aided Dispatch
CFR	Community Fire Refuge
DIER	Department of Infrastructure, Energy and Resources
EDACS	Enhanced Digital Access Communication System
FSC	Fire Services Commissioner

FT	Forestry Tasmania
IAP	Incident Action Plan
IMT	Incident Management Team
NAFC	National Aerial Firefighting Centre
NSP	Nearby Safer Place
PAT	Police Association of Tasmania
PFCP	Police Forward Command Post
POC	Police Operations Centre
PWS	Parks and Wildlife Service
RFOC	Regional Fire Operations Centre
RICC	Regional Incident Control Centre
SEMAG	Security Emergency Management Advisory Group
SES	State Emergency Service
SFOC	State Fire Operations Centre
SREMC	Southern Regional Emergency Management Committee
TEMP	Tasmanian Emergency Management Plan 2009

PART F

CFR	Community Fire Refuge
DHHS	Department of Health and Human Services
DIER	Department of Infrastructure, Energy and Resources
DPIPWE	Department of Primary Industries, Parks, Water and Environment
DTNH	Dunalley Tasman Neighbourhood House
NRIS	National Registration and Inquiry System
SEMAG	Security Emergency Management Advisory Group
SEMC	State Emergency Management Committee
SES	State Emergency Service

SREMC	Southern Regional Emergency Management Committee
SRSC	State Recovery Sub-Committee
TERMC	Tasman Emergency Recovery Management Committee

PART G

ABC	Australian Broadcasting Commission
DPAC	Department of Premier and Cabinet
QPS	Queensland Police Service
SMS	Short message service
TEMP	Tasmanian Emergency Management Plan 2009

PART H

ICCS	Incident Command and Control System
IMT	Incident Management Team
PWS	Parks and Wildlife Service
SEMC	State Emergency Management Committee
SES	State Emergency Service
TEMP	Tasmanian Emergency Management Plan 2009

PART I

BRAM	Bushfire Risk Assessment Model
COAG	Council of Australian Governments
SEMC	State Emergency Management Committee
SFMC	State Fire Management Council
TEMP	Tasmanian Emergency Management Plan 2009



Photo courtesy of Workplace Standards Tasmania

PART A – INTRODUCTION

The bushfires active on and following 4 January 2013 were the most significant bushfire emergency in Tasmania for many years, probably since the devastating fires in 1967.

A Tasmanian Bushfires Inquiry was established to inquire into the fires, with a focus on three fires known as the Forcett, Bicheno and Lake Repulse fires. These fires were named based on the location where they started and the names do not represent the total areas in which they burned. Former South Australian Police Commissioner Malcolm Hyde AO APM OSTJ was appointed as the Special Investigator for this Inquiry. The Inquiry was supported by Ms Sonia Weidenbach, Department of Justice; Senior Station Officer Andrew McGuinness, Tasmania Fire Service; and Senior Sergeant Jason Elmer, Tasmania Police.

A copy of the terms of reference for the Inquiry is at Appendix A1. The areas for the Inquiry to report on are broad and are summarised as:

- the immediate causes and circumstances of the fires
- all aspects of the emergency response
- the adequacy of the transition from response to recovery in the week following 4 January
- the preparation and planning of all levels of government, agencies and the emergency services for the 2012–13 fire season and the forecast weather for 4 January
- the effectiveness of the strategies and plans for managing bushfire risk in place before 4 January
- the use and efficacy of community alerts, warnings and information in general; and in particular, the use of social media by authorities and the community.
- any other relevant matter.

In applying these areas to report on, the terms of reference specified that the Inquiry was to:

- make recommendations about improvements to protect the community from bushfires
- provide interested parties with the opportunity to make submissions and to take those submissions into account
- consider the research and reports of the Bushfire Cooperative Research Centre and the Australasian Fire and Emergency Service Authorities Council, initiated by Tasmania Fire Service
- make public any submissions, unless confidentiality is agreed to
- focus at the strategic, systemic and organisational level and not on individual fault finding.

No special powers were given to the Special Investigator to conduct inquiries, such as being able to take evidence on oath, compel witnesses to testify or seize documents.

The approach taken in the Inquiry was consistent with the above parameters. Inquiries were conducted and people were interviewed in a way which sought to avoid individual blame, and concentrate on finding out how arrangements worked and where they could be improved. It is important to appreciate that this type of Inquiry was not a Royal Commission or a form of Judicial Inquiry, where a forensic examination of witnesses occurs.

People have been identified by position or role in the Report, rather than by name, to avoid so far as possible associating people with actions. It is not possible to avoid any association with blame for people where it has been found that particular arrangements did not work well, and they were under the authority or control an individual or group of people. Where this occurred, people may feel they have been blamed, but there is no alternative if areas for improvement are to be identified.

The call for submissions was publicly advertised and a website established to promote the Inquiry and provide information. Letters were written to interested parties identified by the Inquiry inviting submissions. 102 submissions were received from individuals, agencies or groups and these will be published as announced. Some redactions have been made from the published submissions for personal, offensive or personal-blameworthy material. The Inquiry met with some submitters at their request, and also sought out and interviewed people, many of whom were directly involved in operations for the fires. 117 people were interviewed.

The Inquiry has been mindful of the requirement to report by 30 September 2013, and inquiries have been made and issues researched and analysed to meet this deadline. Considering the breadth of the terms of reference, the Inquiry could have benefitted from more time, but the time available has been adequate to identify substantial issues which can provide a foundation for suitable reform.

Due to the deadline, the Inquiry has commented on areas in the Report where inquiries could not be made or completed and, in some cases, where further review is suggested or recommended.

It has not been possible to investigate every issue, suggestion or recommendation made in the submissions, but they have been taken into account. The Inquiry has concentrated on the main issues and examined these to the extent necessary to be satisfied there was a matter that needed to be dealt with.

In conducting these inquiries, negative matters tend to be identified and readers of this Report should keep in mind that there were many positive aspects to the emergency operations. For example, a number of fires might be extinguished early, but people will concentrate on the one where this didn't occur. A balanced approach to the Report, recognising the purpose of the Inquiry and the consequence of a close critical review, is recommended.

The research and reports referred to in the terms of reference were examined. A final report was available from the Australasian Fire and Emergency Service Authorities Council and where appropriate, reference has been made to it in the Report. This report was in the form an audit. It should be noted that it was not a critical inquiry, did not investigate the way the fires were managed and did not examine some other areas such as fire tactics. The Inquiry had access to more material and was conducted in a different form. To this extent, there are different conclusions drawn in some areas. The Bushfire Cooperative Research Centre report was only available to the Inquiry in preliminary form and has been referred to in this Report on the basis of this status.



Photo courtesy of Andrew Skelly

In reading the published submissions, especially those from some of the agencies, it will be observed that there are some generalisations and broad statements made on important matters. The Inquiry looked beyond claims made and often discovered a different situation.

It is important to acknowledge at the start of this Report the efforts of firefighters and police in the field protecting the community during the fires. They deserve the highest praise for their commitment and the selfless way they performed their duties. In some cases, particularly when the Forcett fire was at its most destructive on the Tasman and Forestier Peninsulas on 4 January, these officers put themselves in extreme personal danger.

The personal commitment and risk was highlighted by the unfortunate death of Peter Cramer, a firefighter from the Victoria Department of Sustainability and Environment and a volunteer for many years with the Victorian Country Fire Authority. He was on secondment to support operations in the Forcett fire and regrettably died of natural causes at Taranna. At his funeral, it was said he died doing what he loved most: working on fires, working in the bush and most of all, helping others.

Finally, in conducting its inquiries and making recommendations, the Inquiry has sought to add value to the community by contributing to more suitable and effective emergency management arrangements in Tasmania.



Hillborough Road South Hobart following the 1967 bushfires, photo courtesy of Tasmania Fire Service collection.

PART B: HISTORY OF BUSHFIRE IN TASMANIA

Bushfire is part of the natural history of Tasmania and continues to be a feature of the landscape, as it does for many parts of Australia, especially the south-eastern areas of Australia.

Fire's Role in the Environment

Fire forms an important part of Tasmania's ecosystem and it was used by Indigenous Tasmanians for managing the land and biodiversity and for hunting. Early European settlers also used fire widely in land management practices. In addition, natural fire occurs through lightning strikes.

Some vegetation, such as dry sclerophyll forest in the middle, northern and eastern areas of Tasmania, recovers well from fire, and many species rely on fire for regeneration. The southern and western areas are mainly wetter and fire is not so common or as suitable for regeneration, though the button grass plains can burn readily at most times.

Southern Australia is reputedly one of the most bushfire prone areas of the world and Tasmania is included.

Fire since European Settlement

This overview of fire history does not represent all fire activity. Rather, it provides a description of significant and major fires, with more detail on fire activity in the more recent fire seasons.

Since European settlement in 1803, Tasmania has experienced a number of significant bushfire events.

In January 1854, a large bushfire burnt through the Huon and Port Cygnet areas destroying homes and farming equipment. The size of the fire is unknown, but 14 people died and many were injured. Due to the reliance on local farmers for food production, it is likely there would have been significant community recovery challenges.

From December 1897 to January 1898, devastating fires burned around Hobart and across the Mount Wellington ranges. It is estimated that six people died; 43 properties were destroyed between Oyster Cove and Mount Wellington, including the Longley Hotel, a police station, post office and two churches; and extensive damage to farming areas and infrastructure was sustained.

Strong winds and high temperatures contributed to significant fires in the Derwent and Huon Valleys in the summer of 1933–34. It is estimated that the Forest Fire Danger Index rating reached 92, placing it in today's Extreme range (see Table D.1 in PART D for the Index). Details on property damage are not available; however, a timber mill along with timber valued at \$1.1M in today's terms were lost.

1967 Bushfires

A wet winter and early spring in 1966 led to increased vegetation growth across many parts of Tasmania. Over 1966–67, the State experienced the driest summer since 1885, and on 7 February 1967, southern Tasmania experienced the worst bushfire event in its history.

By mid-morning on 7 February, it is estimated there were 110 fires burning in the southern part of the State. Many were reportedly started from burn-offs in previous days, and others were either accidental or deliberately lit. The temperature on the day reached 39 degrees and a Forest Fire Danger Index rating of 128, placing it in the Catastrophic range.

Over 24 hours, the bushfires:

- burned 264 270ha
- destroyed 1 400 homes and other 128 buildings
- killed 62 people and injured another 900
- destroyed 80 timber bridges, 5 400km of fencing and 1 500 vehicles
- caused stock losses of 62 000.

In some ways, the 1967 bushfires were similar to the events experienced in January 2013. Fires started beforehand and were not completely extinguished; authorities had to contend with multiple fires burning in different areas; and the fires ran through rural and seaside towns where people sought refuge on beaches and in clearings.

A comparison of the weather conditions between the 1967 bushfires and those that are the subject of this Inquiry is provided in PART D.

Fires between 1980 and 2000

Over a more recent period there has been a series of significant bushfire events which continue to challenge the capability of authorities to deal effectively with them.

In February 1981 the west coast town of Zeehan was threatened by bushfires over a number of days and proved difficult to contain and extinguish. Fortunately there was no substantial damage on this occasion.

A 5 000ha fire in February 1982 at Kempton and Broadmarsh was not as kind, killing one person, seriously injuring two others, and destroying eight buildings, 38 outbuildings, substantial farming equipment and fences, and 3 000 livestock. The government of the day declared a State of Emergency for the region.

The Coal River Valley town of Richmond was threatened by a 2 400ha fire in February 1993, though damage was not serious. It took three weeks to contain and extinguish the fire.

A bushfire started from the re-ignition of a previous fire at Ridgeway in January 1998. The fire burned through Fern Tree, Mount Nelson, Taroon and Bonnet Hill and cut the southern outlet between Hobart and Kingston for an extended period of time. Approximately 50 people were injured and seven homes were destroyed.

Fires since 2000

In January 2003, a deliberately-lit fire extended through the Broadmarsh, Mount Dromedary and Brighton areas for two weeks and threatened rural properties throughout the affected area. Despite the fire coming in to suburban Brighton through nearby grassland areas, there was no property loss.

Late 2006 proved to be a busy time for firefighters. In October a deliberately-lit fire started at Risdon Vale on Hobart's eastern shore and ran down the Meehan Range. There was a significant threat to houses and communities. The 800ha fire left 18 000 people without power for a relatively short time as the fire moved under transmission lines, and traffic was diverted away from the Tasman Highway, disrupting access to Hobart Airport. Hobart experienced unusually high temperatures and winds and low humidity for that time of the year, and the Forest Fire Danger Index rating of 123, placing it in the Catastrophic range.

In December of the same year, a fire on the State's east coast destroyed 26 houses and 28 outbuildings. This fire burned over a significant area and impacted on the towns of St Marys, Scamander and Four Mile Creek, and many smaller communities in these areas. One person was killed and there was significant interruption to the tourist season as it approached its peak period.



Photo courtesy of Bernard Plumpton

At the same time, firefighters in the south were dealing with a large bushfire near Kellevie. Difficult terrain caused problems with accessing the fire, and it took several weeks to contain and extinguish. Both the east coast and Kellevie fires destroyed an estimated \$50M in production forest for Forestry Tasmania.

The Lavinia Reserve on King Island sustained serious environmental damage when a deliberately-lit fire burned over 12 500ha in February 2007. This fire proved difficult to resource as the island is reasonably isolated.

In March 2008, the Heemskirk fire destroyed 18 500ha and threatened west coast infrastructure, such as the Savage River mine. The fire was eventually contained before it could impact on the mine and severe economic disruption was averted.

In January 2010, a deliberately-lit 6 500ha fire started near Wayatinah in the Upper Derwent Valley. The fire burned for several days with high fire danger ratings of 48 being reached on 31 January. The fire had the potential to travel into New Norfolk. A large area of regenerated forest and pine plantation was lost and fences, hay sheds and other farming infrastructure destroyed.

The 2009–10 fire season was characterised by a wet winter breaking a prolonged drought which generated significant growth of vegetation across the State. This growth provided a potential link for fires between separate forested areas. A wet winter provided a slow fire start to spring; however, several hot and windy days created an environment for several bushfires to burn, most notably at Dolphin Sands on 20 November, where three houses were destroyed and numerous others were damaged.

Over summer there were several major bushfire events, including a protracted fire at York Town involving significant timber reserves and a potential to impact on the town of



Photo courtesy of Bernard Plumpton

Beaconsfield. Other significant fires occurred in mid to late January at Lake Macintosh (3 500ha were burnt), Wayatinah (6 500ha) and Montagu (2 200ha).

A La Nina weather cycle drove a generally quiet fire season with a wetter than average summer in 2010–11. There was a relatively short period when fire permits were required for burning off, but a longer period was required on King Island, where there were concerns over dry surface fuels and the potential for bushfires to burn overnight. A dry autumn provided some additional fire activity.

For the 2011–12 fire season, La Nina conditions provided a quiet lead-in time for vegetation fires in the southern region while the number of fires in the north and north west were normal. Regular rain in the north west region meant there was below normal bushfire activity, with only one significant fire at Marrawah. The northern region was normal and the south region experienced lower than normal fire activity.

The fire permit period began on 22 December 2011 and continued until after Easter, except in the northwest and the Furneaux Group, where it finished earlier. Despite a reasonably quiet bushfire season, there were still major fires at Evandale (280ha were burnt), Powranna (300ha), Meadowbank (5 250ha) and Symmonds Plains (600ha).

During the 2012–13 fire season, there were a number of fires and it was a busy fire season. Details on these fires are provided in Table E.2 and in PART E.

Summary

Therefore it can be seen that there are a range of fires to be dealt with in a fire season, with variation caused by weather conditions in the lead up to or throughout the season.

Each fire is potentially a major or significant fire if not properly dealt with or where weather conditions compromise the ability to effectively suppress them.

Tables B.1 and B.2 and Figures B.3 and B.4 below provide numerical and comparative information on the fires over the last decade.

Table B.1

Season	2002/03		2003/04		2004/05		2005/06		2006/07		2007/08	
Month	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area
Jul	1	15.5	1	10.0	1	1.0	0	0.0	1	0.1	0	0.0
Aug	1	0.2	1	63.6	0	0.0	0	0.0	3	364.3	2	199.0
Sep	6	103.2	1	31.2	7	79.8	1	1.1	8	169.7	4	174.5
Oct	4	2.9	2	15.1	19	12994.5	2	1.0	13	46672.3	13	1320.6
Nov	9	1504.1	24	86414.1	8	120.1	8	562.9	8	6717.1	6	4849.0
Dec	9	2984.9	15	15203.9	6	67.9	3	36.3	22	54470.2	8	204.1
Jan	24	46142.7	12	12753.8	21	6207.4	17	9850.1	13	32522.8	16	5649.7
Feb	12	11007.8	9	1291.3	3	161.6	3	4.7	13	20535.0	9	1295.3
Mar	5	102.8	5	1687.2	4	184.7	3	4572.5	5	56727.6	10	20007.7
Apr	2	175.7	1	0.1	4	881.5	1	25.1	5	367.1	2	5692.0
May	2	7.8	1	6.2	1	1.7	1	9.4	0	0.0	1	1.2
Jun	0	0.0	2	1.2	0	0.0	0	0.0	0	0.0	1	11.9
Totals	75	62047.5	74	117477.7	74	20700.4	39	15063.2	91	218546.1	72	39404.7

Table B.1

Season	2008/09		2009/10		2010/11		2011/12		2012/13	
Month	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area
Jul	0	0.0	0	0.0	0	0.0	1	0.8	0	0.0
Aug	0	0.0	0	0.0	0	0.0	0	0.0	2	13.2
Sep	2	101.0	0	0.0	0	0.0	1	0.6	2	52.7
Oct	27	3797.6	5	777.7	4	23.1	2	31.2	9	530.0
Nov	4	520.7	6	805.7	5	213.0	10	232.6	9	4545.4
Dec	6	100.7	3	0.9	2	29.3	12	512.0	26	11856.6
Jan	14	3020.6	26	10228.3	3	107.2	24	723.9	32	93422.9
Feb	5	599.3	16	12581.7	0	0.0	10	6421.7	25	5607.4
Mar	2	3.9	4	81.2	10	4113.8	9	435.5	20	3134.4
Apr	1	4.4	0	0.0	0	0.0	5	94.5	2	5.7
May	1	360.9	0	0.0	2	4.6	1	4.8	0	0.0
Jun	0	0.0	0	0.0	4	29.3	0	0.0	1	98.7
Totals	62	8509.0	60	24475.4	30	4520.2	75	8457.7	128	119267.0

Table B.2

Season	2008/09 - 2011/12		2012/13	
Month	No.	Area	No.	Area
Jul	0.5	2.7	0.0	0.0
Aug	0.7	62.7	2.0	13.2
Sep	3.0	66.1	2.0	52.7
Oct	9.1	6563.6	9.0	530.0
Nov	8.8	10193.9	9.0	4545.4
Dec	8.6	7361.0	26.0	11856.6
Jan	17.0	12720.6	32.0	93422.9
Feb	8.0	5389.8	25.0	5607.4
Mar	5.7	8791.7	20.0	3134.4
Apr	2.1	724.0	2.0	5.7
May	1.0	39.7	0.0	0.0
Jun	0.7	4.2	1.0	98.7
Annual	65.2	51920.2	128.0	119267.0
Av fire size		796.3		931.8

Data includes fires greater than 0.1 hectare in size, derived from Tasmania Fire Service and Parks & Wildlife Service databases. Quality assurance has not been verified.

Figure B.3

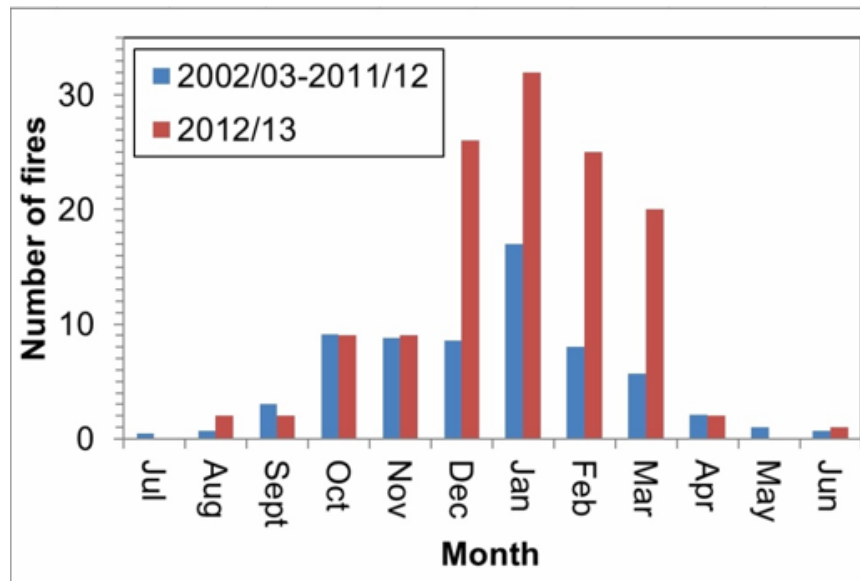
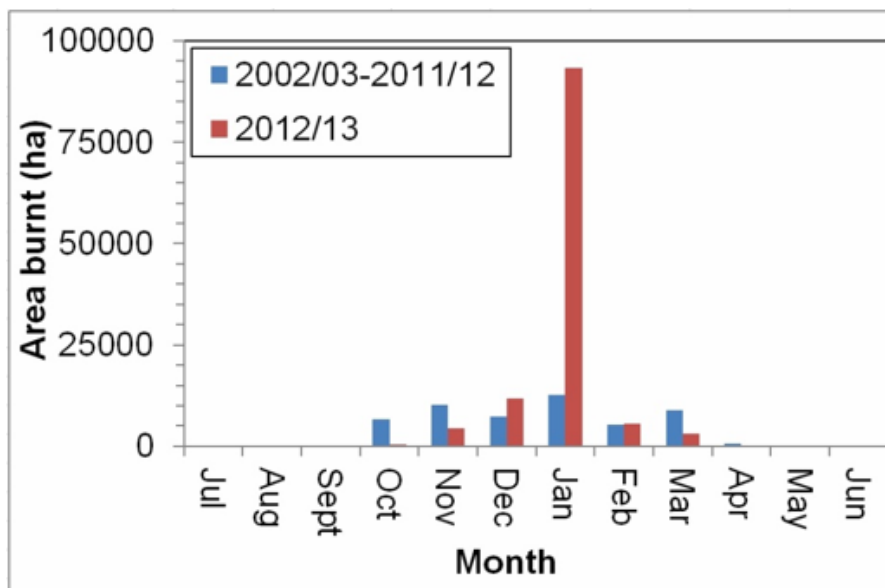


Figure B.4



The chronology of historical fire events does seem to indicate an increasing risk of their occurrence. This may be the product of better recording systems in more contemporary times, and it is necessary to examine supplementary information to better understand whether the risk is increasing or not. In one sense though, the fire risk can already be acknowledged as significant without the need to go any further.



Photo courtesy of Barry Davies

PART C – EMERGENCY MANAGEMENT ARRANGEMENTS

Importance to the Community

Protecting and reassuring the community in circumstances of an emergency that threatens the peace, stability and good order of the community is an important role of government.

In a contemporary context there is a greater emphasis on this role, partly due to community exposure to emergency and disaster events and concerns about climate change, but mainly because of greater expectations of government services. Consequently, the attention of governments at national and state and territory levels has been on achieving best practice.

Emergencies may vary in scale, type and complexity, ranging from what may be regarded as a personal emergency to a disaster which affects a significant geographic area, number of people or a matter of community value. Depending on their ability to cope, people and communities need and expect the intervention of the government, in its various forms, to protect and support them.

In considering what form this intervention might take, it is essential that the matter is examined from the community's perspective. Community confidence in its safety is fundamental, as confidence is a key element of any community being able to function effectively and realise its potential. So too is the concept of prevention. Certainly communities expect an effective response when any form of disorder occurs; however, overwhelmingly, their preference is that emergency events should be prevented.

However, this does not mean that people and communities should be totally dependent on governments, as indicated by the reference above to their ability to cope. Community resilience is a way of strengthening individual and collective capability, and sharing the responsibility supports both owning the problem and achieving the best outcome.

Principles to Apply

The perspectives above reflect principles that underpin a responsible examination and consideration of emergency management arrangements. Similarly appropriate principles can be derived from best practice arrangements currently in place in Australia, some of which have existed for some time.

It should also be noted that typically in Australia, emergency management arrangements are on the basis of an all-hazards approach, which means that they seek to cover a broad range of different types of emergency events. The fires that are the subject of this Inquiry are thus one form of emergency which is not severable from all other emergencies; while remaining focussed on fires and its terms of reference, by necessity the Inquiry must consider the broader context where it is relevant.

Therefore the Inquiry has been guided by the principles of:

- maintaining community confidence
- a preference for prevention
- shared responsibility
- building community resilience
- an all-hazards approach
- holistic or comprehensive arrangements
- integrating and complementing agency responsibilities.

Some further comments will be made in this part on the need for practical and effective arrangements.

Legislative Framework

The functions, responsibilities and authorities for government agencies and organisations involved in emergency management in Tasmania are generally found in the legislation which establishes them or which pertains to particular areas. This is not always as specific and clear as one might expect, especially with older-form legislation, and there will be further comment on this related to Tasmania Police (TASPOL).

The *Emergency Management Act 2006* is the primary overall piece of legislation relevant here, and where there is an inconsistency, it prevails over other legislation relating to emergency management.¹

This Act does not purport to cover every aspect of emergency management, but establishes a framework within which it can operate. Surprisingly, it does not specify roles and responsibilities as clearly as it might.

¹ Emergency Management Act 2006, at s.5.

Definitions

Section 3 of the *Emergency Management Act 2006* defines emergency as:

- (a) An event that –
 - (i) endangers, destroys or threatens to endanger or destroy human life, property or the environment, or causes or threatens to cause injury or distress to persons; and
 - (ii) requires a significant response from one or more of the statutory services; or
- (b) a significant threat of the occurrence of an event of a kind referred to in paragraph (a) in respect of which it is appropriate to take measures –
 - (i) to prevent that possible resulting event; or
 - (ii) to mitigate the risks associated with that threat and that possible resulting event.

Section 3 of this Act defines emergency planning as:

- (a) the planning, organisation, coordination and implementation of measures that are necessary or desirable to prevent, mitigate, respond to, overcome and recover from an emergency; or
- (b) the planning, organisation, coordination and implementation of civil defence measures; or
- (c) the conduct of, or participation in, research and training for any measures specified in paragraph (a) or (b); or
- (d) the development of policy and procedures relating to any measures or actions specified in paragraph (a), (b) or (c).

Roles and Responsibilities

A three tiered approach is taken, with emergency management committees established at State, Regional and Municipal levels. The primary functions at each level are essentially the same, namely (with appropriate changes to reflect Regional and Municipal levels):

to institute and coordinate, and to support the institution and coordination of, emergency management including the preparation and review of the Tasmanian Emergency Management Plan and Special Emergency Management Plans that relate to emergency management for the State.²

The State Committee has primacy over the Regional Committee, and the Regional Committee has primacy over the Municipal Committee.

A Ministerial Committee chaired by the Premier may be established, comprising the State Controller and other Ministers, to perform functions and exercise powers as determined by the Premier.³

² Emergency Management Act 2006, at ss. 7-9, 13-16 and 19-22 respectively.

³ Emergency Management Act 2006, at s. 12.

A State Controller is also established by appointment of the Minister or a default position to the Police Commissioner, which is the current arrangement.⁴ In a similar way, Regional Controllers are commanders in TASPOL.⁵ However, Municipal Coordinators are specifically appointed by the Minister.⁶ The functions and powers of each of these people are also established in the legislation.

The State Controller chairs the State Emergency Management Committee and therefore acts within the terms of the functions and powers specified for the Committee. Further, section 11 of the *Emergency Management Act 2006* provides that the State Controller has a number of functions, one of which is before, during or after an emergency to 'direct the use of resources for emergency management as [they consider] appropriate'.⁷ One interpretation of this part of the section is that it is an enabling provision to allow the State Controller to exercise authority. Alternatively it may be read as providing that the State Controller has a responsibility to act in emergencies. Any ambiguity around responsibility for managing emergencies should be clarified.

Other sections of this Act provide that the State Controller can:

- direct the State Committee to assist 'in the performance and exercise of [their] functions and powers'⁸
- 'impose functions on a Regional Committee or Regional Controller'⁹
- 'do all other things necessary or convenient to be done in connection with the performance of [their] functions'.¹⁰

Functions and powers for Regional Controllers and Municipal Coordinators are also set out in the legislation. Section 18 of this Act provides the functions and powers of Regional Controllers, but it is not in precisely the same terms as for the State Controller and it is less clear on whether there is a responsibility to manage emergencies, other than as initiated by the State Controller.

Of particular note is that the Municipal Coordinator has the 'authority and ability to make decisions relating to the coordination of emergency management in the municipal area'.¹¹

Emergency powers may also be authorised by the State Controller to be exercised in accordance with the authorisation if they are satisfied that an emergency is occurring or has occurred; and due, to the occurrence of the emergency, there are reasonable grounds for the exercise of the powers to protect people, property or the environment.¹² The powers are set out in Schedule 1 of this Act.

4 *Emergency Management Act 2006*, at s. 10.

5 *Emergency Management Act 2006*, at s. 17.

6 *Emergency Management Act 2006*, at s. 23.

7 *Emergency Management Act 2006*, at s. 11(1)(b)(i).

8 *Emergency Management Act 2006*, at s. 9(1)(d).

9 *Emergency Management Act 2006*, at s. 11(2)(a).

10 *Emergency Management Act 2006*, at s. 11(2)(b).

11 *Emergency Management Act 2006*, at s. 23(8).

12 *Emergency Management Act 2006*, at s. 40.

The manner in which the powers are to be exercised is also set out in the Section 40 of this Act. Authorisation:

- is not dependent on the declaration of an emergency (see comment below)
- must be in writing or confirmed in writing
- must specify which powers may be exercised by who
- can continue up to 7 days, but may be extended by the Minister for a further 7 days.

A state of emergency may be declared by the Premier if they are satisfied on reasonable grounds that:

- an emergency is or has occurred
- the circumstances require or may require special emergency powers
- powers otherwise available are or may be insufficient to manage the emergency.¹³

The powers are set out in Schedule 2 of this Act. There are also time limitations that apply.

If a declaration is made, the duties required to be performed by the State Controller, Regional Controller and Councils are set out in this Act.¹⁴ In this case, the State Controller and Regional Controllers are required to implement any emergency management plan and act as they consider appropriate. Further, a Regional Controller is required to take action to counter the effects or likely effects of the emergency. It is only where there is a declared state of emergency that there is any form of requirement for police to perform emergency management duties.

Part 3, Division 1 of the Act provides for the development of emergency management plans. These will be discussed in the following part of this Report.

Questions over the Legislative Framework

A number of questions may be asked about the efficacy of the legislative framework. Throughout this Report, various elements of the terms of reference will be examined and discussed which relate to these questions, and there will be a more comprehensive analysis and recommendations in PART J of the Report. At this point, it is pertinent to ask:

- should there be a closer engagement by the Government in emergency management?
- are the responsibilities of the State Controller and others as clearly defined as they should be?
- should the Committees have operational roles?
- should there be a broad operational role at municipal level?
- should there be a more structured and accessible structure for declarations of emergency?
- should there be a more flexible approach to the provision of emergency powers?

The reason for raising these questions is illustrated by the following preliminary comments.

¹³ Emergency Management Act 2006, at s. 42.

¹⁴ Emergency Management Act 2006, at ss. 44-46.

Duties outlined for the State Controller are very broad and open-ended. For instance, as chair of the Committee, they are required to 'institute and to coordinate and to support' and elsewhere to 'act as [they consider] appropriate'. Coupled with this is that the *Police Service Act 2003* does not specify police functions, either generally or in relation to emergency management. While it is appreciated that there may be a need for some breadth to cater for different forms of emergency and that the State Controller may not be the Police Commissioner, the lack of reasonable specificity in both places does not create appropriate obligations or accountabilities, and this can have much wider implications than just the *Emergency Management Act 2006*.

In terms of the committees, it is likely that the breadth of the descriptors on their roles would include an operational function. It is hardly likely that a committee can or should undertake an operational role in responding to an emergency. Municipal Committees are even less likely to be able to perform an operational response role, which includes the operations of police and emergency services.

A review¹⁵ of the *Emergency Management Act 2006* has been conducted by the executive officer to the State Emergency Management Committee. This review has some very useful suggestions, including changing the role of the Premier in making declarations, and it will be referred to in PART J. However it does not examine the framework established by the legislation.



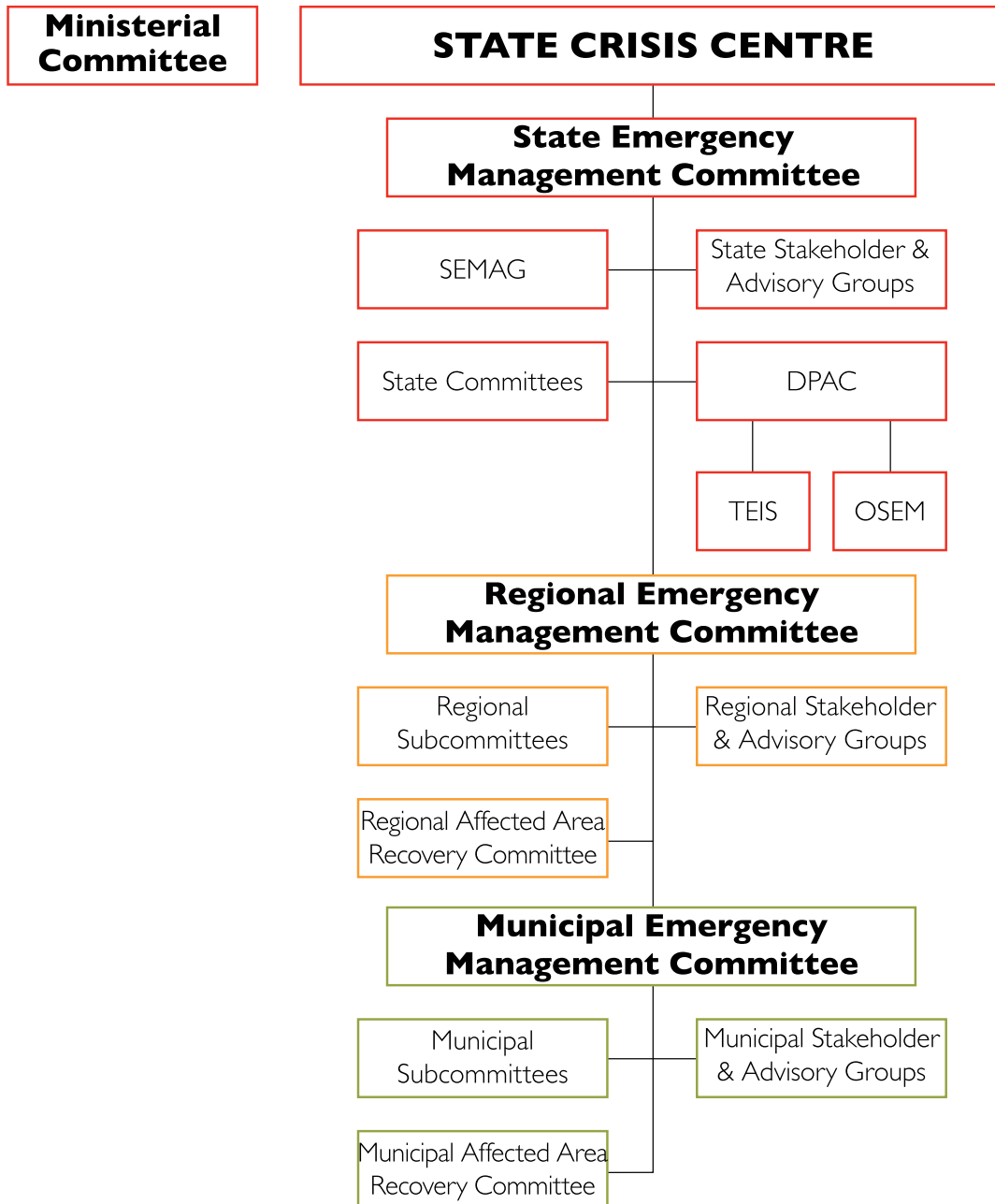
Image courtesy of Warren Frey

15 Review of the Emergency Management Act 2006, Discussion Paper, version 1.1., 6 December 2012.

Structure and Plans

Figure C.1 represents the bodies established for emergency management and their relationships, excluding those within Tasmania Fire Service (TFS) and TASPOL.

Figure C.1 Ministerial (or Cabinet) Committee



As referred to above, a Ministerial Committee may be convened under the legislation, and this may be a Cabinet Committee.¹⁶ The role of the Committee is not seen as managing the operational deployment of agency resources and is described in the Department of Premier and Cabinet submission to the Inquiry as:

- ensuring all necessary actions are taken across government in a consistent, coordinated and timely way

¹⁶ Department of Premier and Cabinet (DPAC) submission, at p. 8.

- setting priorities for response and recovery strategies where these go beyond the portfolio responsibilities of any one minister
- approving the broad strategy for public information, and coordinating inter-governmental communication as required.¹⁷

Cabinet considered bushfire issues on three occasions immediately following the fires and on 8 January, the Premier established a Ministerial Committee (the Interim Bushfire Recovery Committee).¹⁸

State Crisis Centre

This Centre may be activated by the State Controller to support whole-of-government coordination of strategy, policy, public information and requests for assistance. Factors to be considered in deciding whether to activate the Centre include:

- the geographic area, severity or nature of the emergency and its actual or potential impact on Tasmania
- the likelihood that the emergency is a terrorist incident
- whether management of the emergency is beyond the capacity of the response agencies
- whether there is a community expectation of whole-of-government leadership
- the potential impact on multiple sectors, industry of State importance, or the Tasmanian economy
- whether the emergency involves cross-jurisdictional considerations, including requests for inter-jurisdictional assistance
- whether the emergency involves a number of Tasmanian Government agencies which require whole-of-government coordination
- the degree of involvement by the State Controller and Premier in coordinating the response and delivering public information.¹⁹

A Public Information Unit is part of this Centre, and the Centre was partially activated to operate this unit on 5 January. While TFS and TASPOL maintained responsibility for liaison with the media during the response phase, the Public Information Unit led broader issues and communications activities such as developing and distributing information packs, monitoring social media, and promoting official channels for cash donations.²⁰

State Emergency Management Committee

This Committee is chaired by the State Controller and executive support is provided by the Director of the State Emergency Service. Membership comprises the Secretaries of the Departments of Police and Emergency Management, Premier and Cabinet, and Health and Human Services, Deputy Secretaries of Department of Police and Emergency Management and Premier and Cabinet, Chief Officer of TFS, Chief Executive Officer of Ambulance Tasmania and Director of the State Emergency Service.

¹⁷ DPAC submission, at p. 8.

¹⁸ DPAC submission, at p. 25.

¹⁹ DPAC submission, at p.10.

²⁰ DPAC submission, at p.32.

This is a very narrow membership, concentrated on the emergency services, for the breadth of emergency management needed to properly prepare for emergencies.

The functions of this Committee are referred to above; they are also described in the Tasmanian Emergency Management Plan (TEMP) 2009 as:

- instituting and coordinating policy, arrangements and strategies for State-level emergency management (including maintaining the TEMP and any related State emergency plans)
- coordinating/overseeing the management of emergencies that affect more than one region and other emergencies the SEMC considers appropriate
- identifying and promoting opportunities for improvement in emergency management. This can include imposing functions on the Regional Committees and State subcommittees.²¹

Security and Emergency Management Advisory Group

This Group has been set up under the TEMP. Membership includes the Deputy Secretaries of most Government departments or their principal advisers.

The function of this group is described as overseeing whole-of-government emergency management and counter-terrorism activities.

There is some ambiguity around whether it has an operational role, as the TEMP also refers to the Group as providing strategic policy advice to institutionalise and oversee emergency management efforts, and to oversee the development and maintenance of counter-terrorism and emergency management capabilities.²²

Regional Emergency Management Committees

Tasmania is divided geographically into three regions, and there are committees established in those Southern, Northern and North Western Regions. Membership for each includes the Regional Police Commander as the chair, and senior members of the emergency services, Municipal Coordinators, recovery representatives, other Government agencies and enterprises, utilities and relevant volunteer organisations/non-Government organisations.

The function of these Committees is referred to previously and described in similar terms to the State Emergency Management Committee.²³

Municipal Emergency Management Committees

These Committees are established at municipal level. They are supported by the Municipal Coordinators appointed by the Minister. Membership includes staff and elected officials from the council, senior representatives of the municipal emergency services, other Government agencies and enterprises, utilities and volunteer organisations.

21 Tasmanian Emergency Management Plan (TEMP) Issue 6 2009, at p. 24.

22 TEMP, at p. 24.

23 TEMP, at p. 25.

The function of the Committee is referred to previously and is described in similar terms to the State Emergency Management Committee.²⁴

Affected Area Recovery Committees

Councils can establish these Committees to assist with longer-term recovery activities. They are usually chaired by the Mayor.

The main function of the Committee is to provide a management structure for coordinated community recovery and facilitate communication and consultation about the recovery efforts to the community.²⁵

Tasmanian Emergency Information Service

This Service uses call centre services across the Government so there is a single point of contact for the community during an emergency. The Service has no role in the operational response to an emergency and does not replace '000' or other emergency contact arrangements.²⁶

The Service was activated at 8.00pm on 4 January and received calls on the dedicated 'Bushfires Hotline' and from the TFS's general inquiries number. It received almost 8 000 calls until 14 January, including over 4 000 calls in its first day.

Tasmanian Emergency Management Plan (TEMP) 2009

A detailed plan has been prepared and approved by the Minister as required by the *Emergency Management Act 2006*. It has been reviewed and the latest Issue was approved on 2 January 2013 (Issue 7.1). This Issue was not circulated at the time of the fires and a previous Issue (Issue 6.0) was the active plan, and has been referred to in this Inquiry. Only minor changes occurred between the plans.

The TEMP provides a significant level of detail, though in some places it broadly describes what arrangements should look like, rather than specify what is established or required.

Reference will be made to the TEMP throughout this Report where appropriate. However, attention is drawn to a number of features of the TEMP at this point, as they are important parts of the structure of arrangements.

The planning framework which is typically used in emergency management is referred to as PPRR: prevention, preparation, response and recovery. There has been some adjustment to the prevention element recently to include mitigation, and so the TEMP is based on actions and roles across the spectrum of the planning framework. PPRR is defined in the TEMP as:

- prevention and mitigation: planned and coordinated measures that eliminate or reduce the frequency and/or consequences of emergencies
- preparedness: planned and coordinated measures so safe and effective response and recovery can occur

24 TEMP, at p. 25.

25 TEMP, at p. 26.

26 DPAC submission, at p. 11.

- response: planned and coordinated measures that resolve emergencies.²⁷

While Issue 6.0 of the TEMP does not define 'recovery', Issue 7.1 does:

- recovery: a coordinated process of supporting emergency-affected communities in reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical wellbeing.²⁸

The National Inquiry on Bushfire Mitigation and Management Report 2004, endorsed by the Council of Australian Governments, refers to a 'five R' framework: research, information and analysis, risk modification, readiness, response, and recovery.²⁹ This framework does not appear to have been taken up in emergency management arrangements generally.

Responsibilities are designated in the TEMP as a means of seeking to overcome any lack of clarity or confusion; and for the primary management authority to deal with particular hazards for prevention and mitigation, preparedness, response and recovery.³⁰

Another key concept in emergency management that is universally used across Australia and is highly relevant to this Inquiry is the responsibility and activity encapsulated in the words command, control and coordination:

- command: the direction and management of personnel and resources within an organisation in an emergency
- control: across agencies, where the agency in control can direct other agencies or organisations in managing an emergency
- coordination: the bringing together of agencies and resources to ensure there is effective response and recovery operations.

TEMP has similar but slightly different descriptions.³¹

These terms were examined by the 2009 Victorian Bushfires Royal Commission and 'coordination' in particular was taken to meaning a role necessitating 'active monitoring of an emergency situation and ensuring that specific outcomes were being achieved'.³² Some jurisdictions, such as South Australia, have included this concept in their plans, so there is oversight to ensure that a control agency is meeting its responsibilities.³³

These concepts and their practical application will be discussed later in this Report.

In addition to the TEMP, the State Emergency Management Committee can develop special plans to deal with particular matters. One such plan, mentioned here as an important part of the framework, is the State Special Emergency Management Plan—Recovery.

27 TEMP, at pp. 7-8.

28 Tasmanian Emergency Management Plan 2013, Issue 7.1, at p. 4

29 Council of Australian Governments National Inquiry on Bushfire Mitigation and Management report 2004, at p. 52.

30 TEMP, at pp. 29–33.

31 TEMP, at pp. 4 - 5.

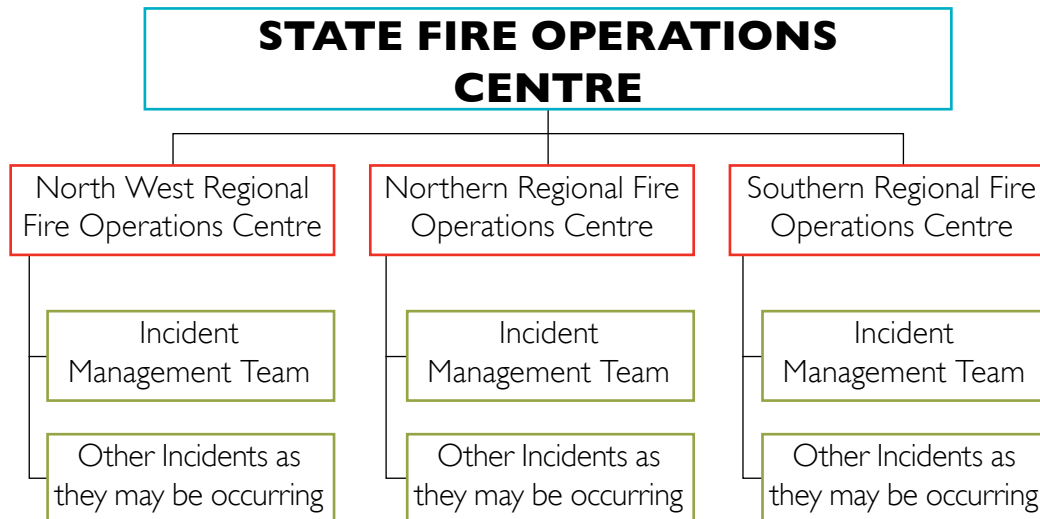
32 Final Report, Volume II, Part One, at p. 74.

33 South Australian State Emergency Management Plan 2013, at p. 27.

Tasmania Fire Service (TFS)

Figure C.2 outlines the structure of TFS operational arrangements.

Figure C.2



Each of the components of the structure is intended to perform the following roles:

- State Fire Operations Centre: an operations centre established at the State level. The State Fire Incident Controller will have the overall command and control of fires and fire related emergencies
- Regional Fire Operations Centre: an operations centre established at a Regional Level. This Centre is intended to support Incident Controllers in the field, but does not assume command and control of the fires it is supporting the management of
- Incident Management Team: the group of people responsible for the functions required to manage a fire
- Incident Controller: the individual responsible for the management of all activities for a particular incident.

TFS uses the Australasian Inter-service Incident Management System–Incident Control System to manage bush fires. This system has been well established within fire services across Australia and has been the subject of ongoing development.

A significant feature of managing bushfires in Tasmania has been the interagency Fire Management Protocol between the Tasmanian Fire Service, Parks and Wildlife Service, and Forestry Tasmania. Arrangements for jointly dealing with fires, regardless of land tenure, are established in the Protocol, and it has the benefit of being used extensively over a number of years.

The agencies are responsible as follows:

- TFS: for management and suppression of structural fires statewide and for fires on private land, unallocated Crown land and in the Wellington Park. Where fires occur under conditions and in situations where there is an imminent risk to, or actual impact on structures and communities, TFS shall direct the response to those fires where practicable

- Department of Primary Industries, Parks, Water and Environment (represented by the Parks and Wildlife Service): for management and suppression of fire on land reserved under the *Crown Lands Act 1976* and the *Nature Conservation Act 2002*
- Forestry Tasmania: for management and suppression of fire in State forest.^{34,34}

For the purposes of these arrangements and consistent with the Australasian Inter-service Incident Management System–Incident Control System they use, fires are classified as:

- Level 1 Incident: a small, simple incident that is generally controlled with local resources
- Level 2 Incident: a developing or developed incident of medium size or complexity, carrying moderate risk, that will generally require the use of resources from outside the District/Region and could involve one or several agencies
- Level 3 Incident: a major incident carrying high risk that involves many resources and inter-agency operations.³⁵

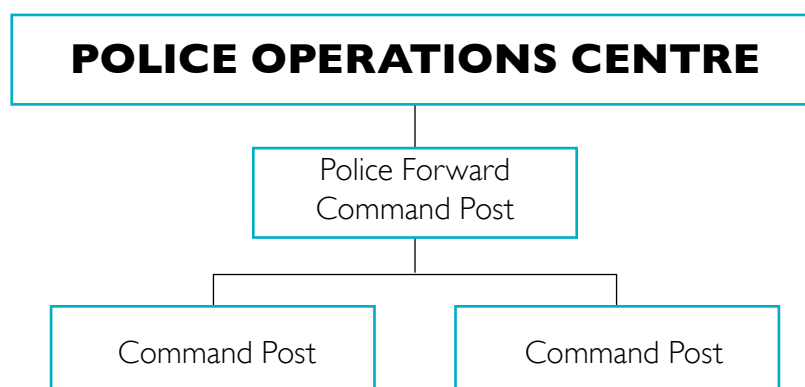
Responsibility for responding to fires is outlined in the Protocol in line with land tenures, but TFS is the designated agency when there is an imminent risk or actual impact on any structures or communities. However, the guiding principle is that the most able firefighting crew of any agency will respond immediately to any fire as a priority, regardless of the land tenure involved.³⁶

A Multi-Agency Coordinating Group is established by the Protocol and recommends to the Chief Officer of TFS the establishment and resourcing of an Incident Management Team for Level 3 fires. These teams often consist of personnel from each agency. The future of this Group is being reconsidered as a consequence of the new fire arrangements, which will be dealt with later in this Report.

Tasmania Police (TASPOL)

Figure C.3 outlines the structure of TASPOL operational arrangements.

Figure C.3



Each of the components of the structure is intended to perform the following roles:

- Police Operations Centre: an operations centre established where the Operations Commander facilitates the overall management of incidents occurring in the District

34 Interagency Fire Management Protocol 2012-13, at p. 2.

35 Interagency Fire Management Protocol 2012-13, at p. 1.

36 Interagency Fire Management Protocol 2012-13, at p. 2.

- Police Forward Command Post: the location where the tactical command of a situation is facilitated. The Police Forward Commander in charge is responsible for the command of available resources related to the effective management of the incident
- Command Post: in large scale incidents it may be necessary to establish smaller Command Posts closer to the incident site to facilitate line of control and communication.

There were discussions between police and fire agencies nationally to have police move to the Australasian Inter-service Incident Management System—Incident Control System over an extended period of time. However, police agencies were reluctant to move to the system due to some perceived limitations. An Incident Command and Control system developed by the National Counter-Terrorism Committee was used in many police agencies, and this has been further developed by the Australian and New Zealand Policing Advisory Agency into a system compatible with the Australasian Inter-service Incident Management System. TASPOL uses the National Counter-Terrorism Committee Incident Command and Control system and has recently endorsed the Incident Command and Control—plus system, which is in the early stages of implementation. Revised Emergency Operations Major Incident Guidelines were also issued in September 2012.

There may well be implementation issues with these recent arrangements.

The Joint Bushfire Arrangements between TFS and TASPOL were established in July 2010. This document sets out the operating arrangements between the agencies in a spirit of working cooperatively and collaboratively, and is primarily an information document for police on fire matters.

Practical and Effective Arrangements

To be effective, structures and plans must complement and support necessary action in managing emergencies, and there are a number of matters which should not be overlooked in determining how arrangements should be designed and applied, namely:

- roles and responsibilities, especially lines of authority, should be clear and unambiguous - there is not time to develop or debate this in an emergency
- people with operational roles should not be distracted by meetings which are either unnecessary or of marginal value for that person
- operational structures should be as direct and as simple as possible
- action should be proactive wherever possible
- 'cold' starts should be avoided
- arrangements should be made which can be scaled up and do not have gaps due to hand-over arrangements
- all necessary elements for managing emergencies — command, control and coordination — should be included
- arrangements should be prepared, ready to use
- there are limited significant emergencies in Tasmania to gain experience in — use every opportunity to test and practice arrangements.



Photo courtesy of Janice James

PART D – THE CAUSE AND CIRCUMSTANCES OF THE FIRES

Under its terms of reference, the Inquiry is required to report on the immediate causes and circumstances of the bushfires which were active on 4 January 2013, with particular focus on the Forcett, Lake Repulse and the Bicheno fires. The Inquiry has not examined any other fires in close detail. Please refer to PARTS B and E for detail on the number of fires over the past 10 years and the 2012–13 fire season.

In preparing this part of its report, the Inquiry wishes to acknowledge the contribution made by the fire cause investigators in Tasmania Fire Service (TFS) and Tasmania Police, Dr Jon Marsden-Smedley¹ and the Bureau of Meteorology (the Bureau).² This part substantially refers to the material they provided and the Inquiry is grateful for their expertise.

Influences on Fire Behaviour

Wind speed, slope, fuel characteristics and fuel moisture are the main factors influencing the fire spread rate. Fire spread rate, fuel height and fuel load primarily determine fire intensity.³

The relative importance of wind speed, fuel characteristics and fuel moisture on fire behaviour varies at different wind speeds. As wind speed increases, it begins to dominate as an influence on fire behaviour.

The conditions at ground level and the atmospheric stability should be considered. In highly unstable atmospheric conditions, fires are more likely to form large convection columns, increasing the fire ventilation rate and, in turn, increasing wind speed and decreasing humidity. Fires burning in unstable atmospheric conditions are much more likely to have enhanced levels of fire behaviour.

¹ Tasmanian wildfires January-February 2013: Forcett-Dunalley, Repulse, Bicheno, Montumana, Molesworth and Gretna, Report prepared for Tasmania Fire Service by Dr Jon Marsden-Smedley BSc (Hons), PhD, 2-13.

² Submission No. 56.

³ Refer to the Tasmanian wildfires Report 2013 for a detailed explanation of the influences on fire behaviour at pp. 6–12, by Dr Jon Marsden-Smedley.

The fuel load significantly influences the fire's intensity. Models for predicting fuel hazard ratings and fuel loads have been developed, as have methods of calculating fuel moisture.

Temperature, as a single factor, has a minor influence on fuel moisture and fire behaviour:

Direction of fire travel is determined by wind speed and terrain. Wind and the direction of a slope have a similar effect of reducing the distance between the fire and unburnt fuel.

There are three zones to a fire:

- head fire: this is the most intense area. It burns in the same direction as the wind or slope. There are different levels of head fires, and the highest level is a crown fire, which usually occurs in the crowns of trees
- flank fires: these are perpendicular to the head fire
- back fire: this burns down a slope or back into the wind. It is the least intense area of a fire.

At low wind speeds and where the vegetation or topography is relatively uniform, the differences in these parts of a fire are not pronounced.

Fire Danger Indices and Ratings

Fire danger indices and ratings provide a description of the fire suppression difficulty. The primary index used in Tasmania is the Forest Fire Danger Index (FFDI) and a numerical rating is provided for a particular location using air temperature, relative humidity, wind speed and a drought factor. An assumed fuel load of 12.5 tonnes per hectare is used and it does not take into account aspect or slope of the landscape.⁴

The forest fire danger can be expressed as either an index number or descriptive rating (Forest Fire Danger Rating, FFDR), as in table D.1.

Table D.1 Pers Comm, Marsden-Smedley, J, 5 September 2013.

Forest Fire Danger Rating	Forest Fire Danger Index	Fire Suppression Difficulty
Low	0 to 5	Fire control relatively easy
Moderate	6 to 11	Direct attack on fires possible if well resourced
High	12 to 24	Fire control operations difficult and frequently fail
Very High	25 to 49	Fire control operations very difficult and normally unsuccessful
Severe	50 to 74	Fire control unlikely to be feasible or safe
Extreme	75 to 99	Fire control not feasible or safe
Catastrophic	100+	Very high level threats to life and property

There are limitations to the FFDI forecasts as an overall measure of risk, in that they vary for particular times and locations.

⁴ Submission No. 56.

For the purpose of forecasting weather, Tasmania is divided into 11 districts. The Bureau has a method for developing an index rating for each district.⁵ In the 2012–13 fire season, fire weather warnings were issued for a district if the FFDI was Very High. TFS considers weather forecasts when issuing a total fire ban.

Spot fire ratings can also be issued on request by TFS for particular areas.

The rating system has only recently been updated nationally by the Australasian Fire and Emergency Service Authorities Council (AFAC). However, it seems to the Inquiry that there are aspects of the rating system which ought to be further considered:

- atmospheric stability will make a difference to fire behaviour, and methods of incorporating this into fire danger indices and ratings should continue to be examined
- depending on atmospheric stability, current danger ratings at a lower level are likely to be more dangerous than is reflected in the model (for example, at Very High or Severe levels) and the model is likely to mislead people on the risk
- Considering the above point, the model may cause a false sense of security in people who may consider a Very High or Severe rating to be not such a risk, because there are more levels to follow. In terms of warning people of the risk and the action they ought to take to minimise that risk, it should be considered whether the Extreme and Catastrophic ratings serve the intended purpose.

The Continuous Haines Index (C-Haines Index) can provide a measure of atmospheric stability, and this may be used to help determine fire danger ratings. The Index varies between zero and 13. This area is still the subject of research and verification of the index will occur as knowledge increases.

Dr Marsden-Smedley told the Inquiry that in his opinion, at a moderate or higher FFDI, the thresholds of the C-Haines Index set out in Table D.2 should apply.

Table D.2 Pers Comm, Marsden-Smedley, J, 5 September 2013.

Continuous Haines Index	Likely fire behaviour and fire prediction reliability
0-4	Fires are easily controlled. Modelling is highly likely to over-predict fire travel.
4-8	Fires may be difficult to control and fire behaviour may be erratic. This is the transition phase of fire behaviour. Modelling is likely to be close to actual fire behaviour.
8-10	Fires will be difficult to control and fire behaviour will be erratic. Modelling is likely to under-predict fire behaviour.
10-13	Fires will be uncontrollable and extremely difficult to extinguish. Modelling is highly likely to dramatically under-predict fire behaviour.

Whether and how this index may help in rating fire risk should be examined by the relevant fire management authorities.

Refer to a section following on the use of predictive modelling.

5 Submission No. 56, at pp. 10 and 11.

Recommendation 1 – that Tasmania Fire Service supports the relevant authorities to continue developing methodologies to forecast and simulate fire risk.

Weather Conditions

In its submission to the Inquiry, the Bureau provides a detailed outline of the weather conditions leading up to and during the fires.⁶

Leading up to 2012–13 from 2006 rainfall was variable, but generally above average, especially for the Forcett area:

- during 2006, 2007 and 2008 rainfall was close to average
- in 2009 it was very much above average
- in 2011 it was above average
- in 2010 and 2012 it was below average, but close to average in the Forcett area.

Total rainfall in 2012 was below or close to average for Tasmania, including the Forcett area, but the first nine months had close to average rain and the last three months were drier than average.

Higher rainfall averages indicate possible above-average vegetation growth.

Rainfall and temperature affect the Soil Dryness Index (SDI) and by the beginning of the 2012 summer period, the SDI values increased, indicating that the moisture in heavy fuels was a little drier than normal almost statewide.⁷

On 3 January, under the influence of a high pressure system, a west to northwest airstream brought hot air over Tasmania. Temperatures reached low to mid 30s about the southeast and east as winds reached 30 to 35kph in the afternoon. The FDDI reached the Very High to Severe range in the eastern and southern districts in the afternoon. Some locations in the southeast experienced wind squalls of 40 to 50kph. Stronger wind with thunderstorms occurred in places (including Hobart, with a 98kph maximum gust) as weather moved in from the west.

Lightning strikes occurred in a number of locations, notably on the Forestier and Tasman Peninsulas, near Bicheno, and between Bicheno and the Freycinet Peninsula. Not all lightning strikes are detected by the Bureau. Very little rain fell with the thunderstorms; with 1mm or less across the State for the 24 hour period to 9.00am on 4 January.⁸

On 4 January, a high pressure system, extensive cloud cover and strong winds kept temperatures in the twenties in the southeast. Some areas experienced their highest January minimum temperatures. FFDRs were generally in the Low to Moderate range, but around Hobart it reached Very High.

6 Submission No. 56.

7 Submission No. 56.

8 Submission No. 56, at pp. 23-24.

During the morning, temperatures began to rise slowly. However, conditions remained similar to earlier, as did the FFDRs. FFDRs increased to High at Hobart Airport and Friendly Beaches. The C-Haines Index at Hobart Airport at 10.00am was a high 9.5.

By late morning, the cloud had mainly cleared and temperatures rose rapidly into the 30s. North to northwest winds began to freshen and the relative humidity lowered. FFDRs reached into the Very High range for much of the state across the midday period. Bushy Park and Hobart Airport recorded Severe before midday and Extreme by 1.00pm. Cloud and onshore winds kept the ratings lower at Dunalley.

From 2.00pm to 5.00pm, temperatures reached the 30s in most areas and high 30s and low 40s in the southeast. North to northwest winds strengthened, averaging 35 to 50kph in southern and eastern areas and gusting to 70 to 90kph. FFDRs reached Extreme for most of the southeast and Catastrophic for short periods (Hobart FFDI 112). Detail is provided in Table D.3.

Table D.3 Forest Fire Danger Rating and Index values for six Bureau observation stations, 2pm-4pm, 4 January 2013.⁹

FFDR and FFDI						
Local time	Ouse	Bushy Park	Hobart	Hobart Airport	Dunalley	Friendly Beaches
2pm	Severe 62	Extreme 85	Extreme 77	Severe 66	Severe 56	High 14
3pm	Severe 71	Extreme 99	Catastrophic 112	Severe 69	Severe 72	Very High 34
4pm	Severe 68	Extreme 93	Extreme 81	Extreme 77	Severe 70	Severe 53

From 5.00pm to 7.00pm, weather conditions began to ease, with temperatures gradually dropping. FFDRs remained high, as indicated in Table D.4.

Table D.4 Forest Fire Danger Rating and Index values for six Bureau observation stations, 5pm-7pm, 4 January 2013.¹⁰

FFDR and FFDI						
Local time	Ouse	Bushy Park	Hobart	Hobart Airport	Dunalley	Friendly Beaches
5pm	Severe 59	Severe 58	N/A	Extreme 76	N/A	Very High 45
6pm	Severe 53	Severe 54	Severe 54	Severe 56	N/A	Severe 54
7pm	Very High 42	Very High 43	Very High 45	Severe 56	Severe 63	Very High 43

From 8.00pm to 11.00pm, temperatures remained high in the eastern part of the state and northerly winds averaged 20 to 30kph.

By 11.00pm, there was a west to southwest wind change across the southeast and southern part of the state and the east coast, with southerly winds of 20 to 30kph about the coasts. FFDRs began to lower but remained in the Very High range until about 9.00pm (Tables D.5 and D.6).

⁹ Submission No. 56, at p. 34.

¹⁰ Submission No. 56, at p. 39.

Table D.5 Forest Fire Danger Rating and Index values for six Bureau observation stations, 8pm-10pm, 4 January 2013.¹¹

FFDR and FFDI						
Local time	Ouse	Bushy Park	Hobart	Hobart Airport	Dunalley	Friendly Beaches
8pm	Very High 38	Very High 39	Very High 33	Very High 39	Very High 38	Very High 33
9pm	High 20	High 18	Very High 30	High 22	Very High 35	High 22
10pm	High 17	High 18	High 22	Very High 28	High 21	High 22

Table D.6 Forest Fire Danger Rating and Index values for six Bureau observation stations, 11pm, 4 January 2013.¹²

FFDR and FFDI						
Local time	Ouse	Bushy Park	Hobart	Hobart Airport	Dunalley	Friendly Beaches
11pm	High 13	High 18	Very High 25	Very High 26	Very High 26	Very High 28

Over 4 January, Catastrophic fire ratings were records at five locations:

- Dunalley (for one minute at 3.38pm)
- Campania (for five minutes around 3.00pm)
- Hobart Airport (for about 10 minutes at from 1.10pm to 1.20pm)
- Bushy Park (for about one hour from 2.10pm to 3.10pm)
- Hobart (for about one hour during 2.30pm to 3.36pm).

Temperatures at several weather stations were either their highest on record for any month or the highest in January, with a number of places exceeding 40 degrees. Hobart was the highest at 41.8, breaking a 126 year record.

Dr Marsden-Smedley summarised the fire risk situation over the 2012–13 summer as having elevated levels of fire danger:

- the 95th percentile for the FFDI was 43 from January to March 2013, compared with 31 for the seven years between 1998 and 2005
- the C-Haines Index was 8.5 from January to March 2013, compared to 5.8 for 1998 to 2005.

The most severe fire danger days during the 2012–13 fire season occurred on 3 and 4 January.¹³

Lake Repulse Fire

The Lake Repulse fire started from an escaped camp fire on the western shore of Lake Repulse at about 11.30am on 3 January; the exact location is uncertain.

On this morning, there were a number of groups of people camping in the area. One group described how they made a camp fire the day before. They were away from the camp site

¹¹ Submission No. 56, at p. 41.

¹² Submission No. 56, at p. 42.

¹³ Tasmanian Wildfires Report 2013, at pp. 12 and 13.

swimming on the morning of 3 January when one of them returned to the camp site at about 11.30am and noticed a small fire about a metre from the fire pit. He saw that a fold-up chair had blown into the fire pit.

The fire was about two square metres in size and he attempted to put it out with branches, a pillow and water, but the wind picked up and the fire took hold in the grass. He and others continued to try to extinguish the fire for about 20 minutes and they then contacted the 'fire brigade'. After a short period when they continued trying to extinguish the fire, they left for their safety. The fire was described over this period as '...initially a lot of flames and not much smoke, but then the wind would slow and we'd get on top of it, then the wind would pick up and off it would go again'.¹⁴

A TFS Fire Investigator attended the fire scene on 4 January, but was not able to closely examine the fire ground as it was still active and dangerous. He did observe a camp fire and features on the fire ground which indicated the fire could have started from that point. There were also indications that the fire developed quickly into a fast moving fire travelling in a southerly direction.

On 10 January, the TFS Fire Investigator returned to the fire scene and was shown a number of camp sites close to the one he observed previously. As there was no security on the fire ground, alteration of the fire scene could not be discounted. Other causes of the fire have been discounted. The Investigator concluded that it was probable the fire started in a specified camp fire, but he could not rule out four other camp fires as the probable origin of the fire. A person was charged with a criminal offence by police in respect to the management of a camp fire. It is sufficient for the purpose of this Inquiry to identify that the fire most likely started from a camp fire.

At the time the fire started, the FFDI was probably about 15, with a north westerly wind of 21kmh. Initially it spread from the ignition point towards the south east as a flank fire. It spotted into a previous logged area where there was debris remaining on the western side at 12.05pm and a few minutes later it spotted to the eastern side of Lake Repulse.



Photo courtesy of Warren Frey

¹⁴ Tasmania Fire Service Fire Investigation Report, TFS Incident Number 201635.

This area on the eastern side of the Lake was contained by fire crews and local farmers by 1.30pm.

Between 11.30am and 2.45pm, the fire travelled about 600m from its origin. Then, through a combination of the fire burning past the Repulse Dam and a small change in the wind direction, it became a head fire burning towards the south east.

At 2.20pm, the fire crossed Dawson Road. Throughout the afternoon, warnings were issued to people in the Ellendale, Meadowbank and Hamilton areas.

Between 2.45pm and 8.00pm, the fire had travelled about 3.3km. It was about 311ha in size with a perimeter of 17.6km. Overnight fire crews patrolled, actively tried to suppress the fire, and consolidated containment lines.

Between 8.00pm on 3 January and 3.45pm on 4 January, the rate of spread of the fire was slowed by poorly-stocked eucalypt plantations in the vicinity of the Repulse and Broad Rivers. It was about 877ha in size with a perimeter of 26.9km. Once it travelled past this area and crossed into the State forest, its rate of spread and intensity increased. Weather reports on the fire ground indicated a temperature of 43 degrees and winds gusting to 40kph. The fire then spread very rapidly as a crown fire towards the south east.

The fire crossed the Broad River and reached Ellendale Road by 5.30pm. Police closed this road as power infrastructure fell across the road. Most residents in the area had been personally warned by police patrols, and some had been directed to evacuate.

By 6.50pm on 4 January, the fire was about 4 109ha in size with a perimeter of 67.9km.

From this time, the fire spread rapidly towards the south east. At about 10.00pm the fire dropped in intensity as it ran into areas burnt in 2012 by the Meadowbank fire. Most of the fire front then stopped, with the exception of the south eastern corner of the fire, which increased in intensity again from 10.42pm until it ran into other areas burnt by the 2012 Meadowbank fire. By 11.00pm, the fire was about 9 008ha in size with a perimeter of 101.8km.

Overnight, the conditions eased and the level of the fire behaviour then decreased, but it still was not contained. Fire crews worked through the night to protect homes and other assets.

The fire continued to burn. On 5 and 6 January, fire crews responded to reports of uncontained fires impacting on properties. Flare ups and reports of new fires were received.

By 8.30pm on 6 January, the fire was 9 545ha in size with a perimeter of 109km. The fire was contained in most areas by 9 January, though the Broad River remained problematic because of its remoteness. There were concerns the fire would escape this area and threaten Ellendale. Remote area firefighting teams, in conjunction with aircraft, worked over a week to contain and extinguish the fire.

All fires were contained by 18 January and it was considered safe by TFS on 22 January. The final area of the fire was 10,489ha in size with a perimeter of 124.1km.

Figures D.7 to D.12 show the progress and spread of the fire.

Figure D.7 Lake Repulse Fire at 2.45pm EDST 3 January 2013.



Figure D.8 Lake Repulse Fire at 8.00pm EDST 3 January 2013.



Figure D.9 Lake Repulse Fire at 3.45pm EDST 4 January 2013.



Figure D.10 Lake Repulse Fire at 6.50pm EDST 4 January 2013.

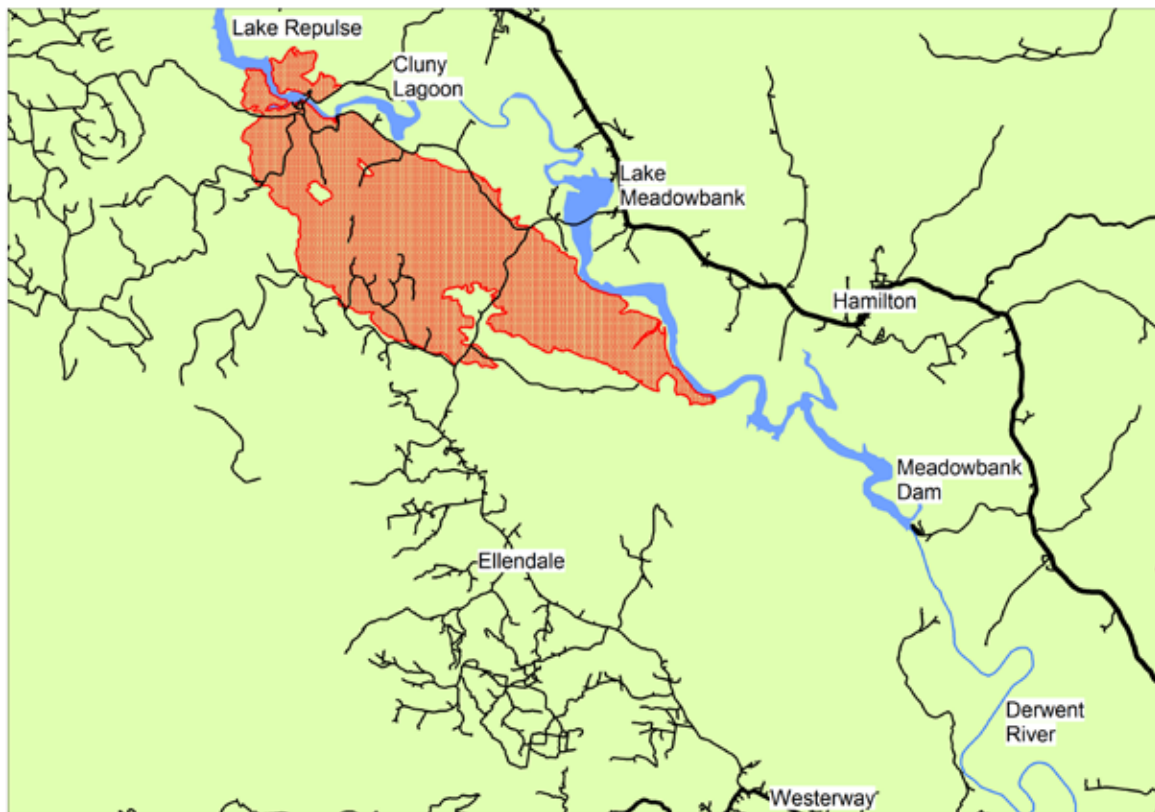


Figure D.11 Lake Repulse Fire at 11.00pm EDST 4 January 2013.

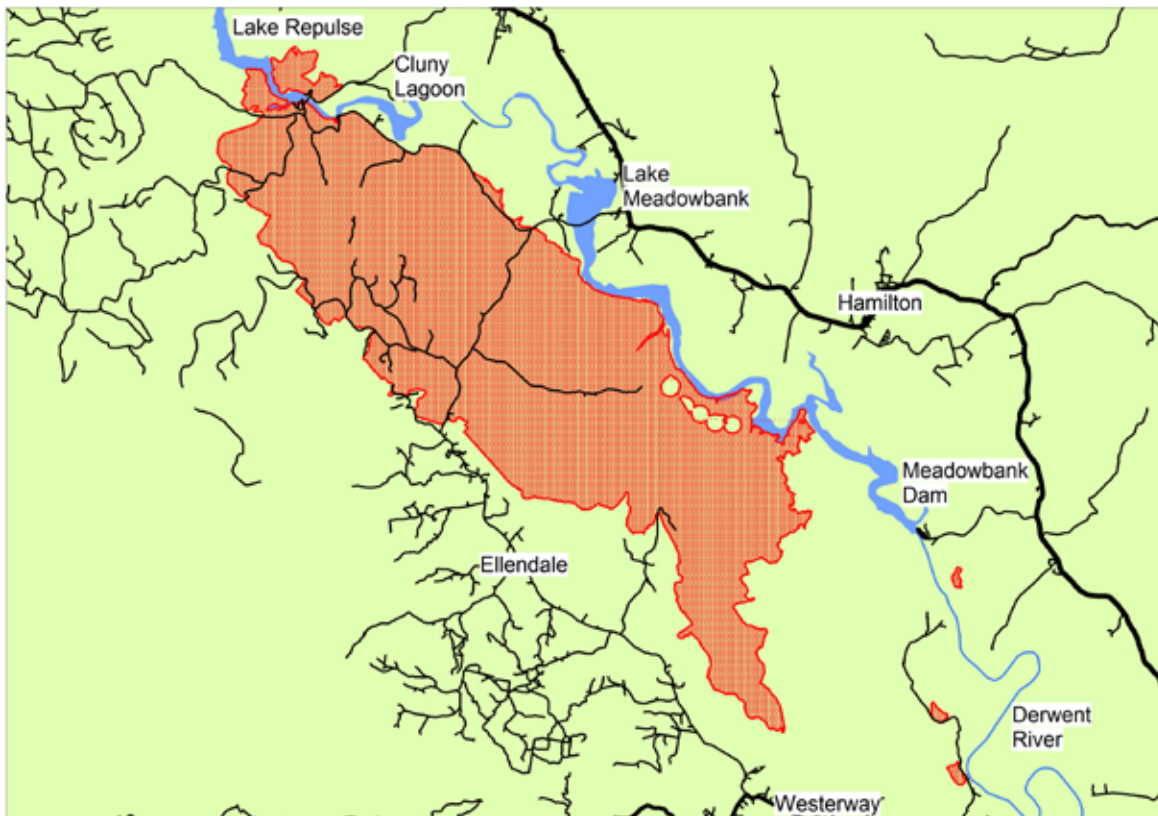
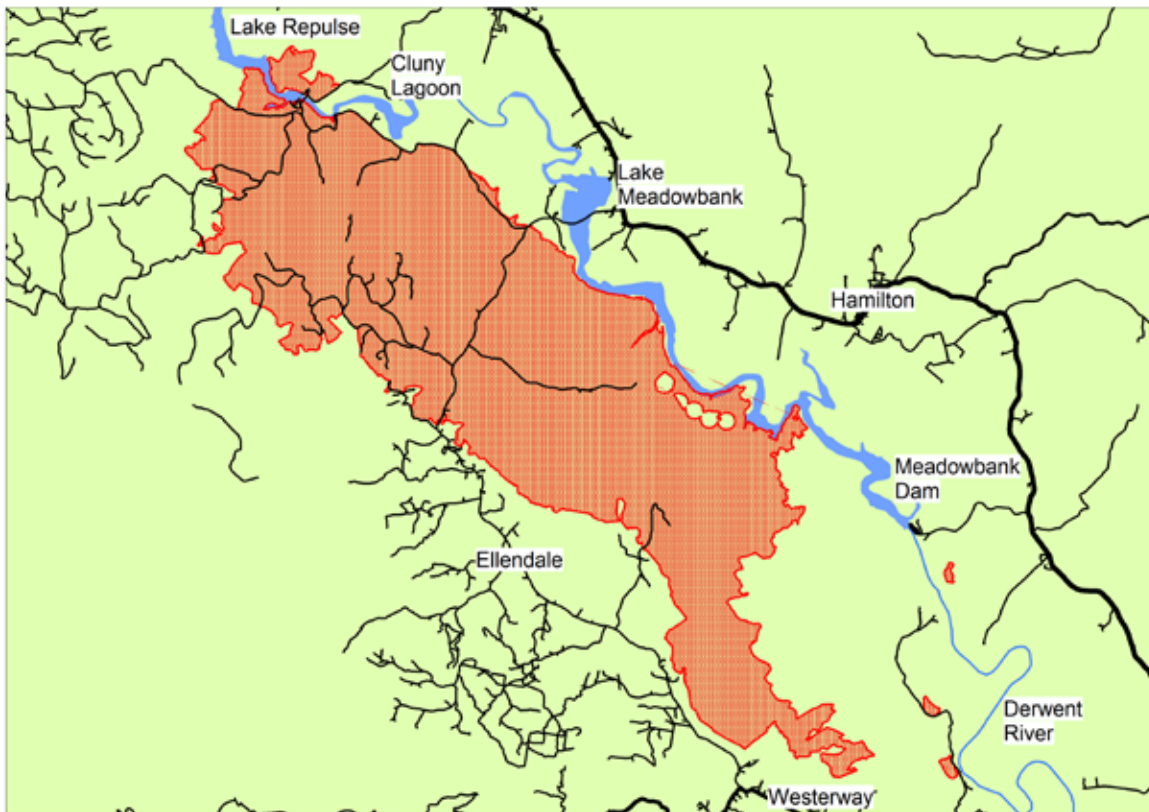


Figure D.12 Lake Repulse Fire at 3.00pm EDST 18 January 2013 (final boundary).



The Forcett Fire

The Forcett fire probably started at about 2.00pm on 3 January from a campfire inside an old burnt out tree stump at a property in White Hills Road, Forcett. The occupants of this property had started a fire in this stump on 28 December 2012, and believed they had extinguished it by smothering it with dirt and pouring water over the top of the dirt. This most likely led to slow combustion taking place in trees roots, and through this process fire reached the surface where free burning took place and winds then carried an ember into nearby grass. Other possible causes of the fire were eliminated, including lightning strikes, which may only have contributed to the rate of spread of the fire. The cause of the fire was classified by investigators as accidental.¹⁵

From this point, the fire spread in a south east direction down a slight slope on a westerly wind as a head fire. Brigade crews arrived at 2.30pm and the fire was estimated to be two hectares in size. Dr Marsden-Smedley comments that it was probable that fire crews could have performed suppression on the northern flank, but would have been unable to suppress the fire's head and southern flank. However by 3.00pm, with the size and intensity of the fire, weather conditions and site access, suppression would not have been feasible with the resources available.¹⁶

At 3.00pm, the FFDI was about 47 and the C-Haines Index was 10.5.

By 3.00pm, the fire was in the vicinity of Gangells Road, about 2.5km from where it started. It was about 2.5ha in size with a perimeter of 0.7km. It moved east and by 4.00pm burnt towards Mother Browns Bonnet. The fire was mapped at 5.35pm; it had travelled 5.9km and was about 506ha in size with a perimeter of 14km. Spotting near Wettenhall Flat had also occurred.

The level of fire behaviour reduced overnight, but it continued to burn southeast in rough country, and the southern and eastern boundary was 12km in length.

A small number of crews remained patrolling the fire overnight.

By 6.45am on 4 January, the fire had increased to about 973ha in size with a perimeter of 19.6km. It was burning slowly in the vicinity of Gangells Road and the southern slopes of Gunns Hill. Smoke and fire made the Arthur Highway dangerous to use and police closed it just before midday.

The fire then began to increase its level of activity. It crossed the Arthur Highway at several locations between Sugarloaf and Blue Hills Roads between 12.00pm and 12.30pm. At 12.30pm, it was about 1 586ha in size with a perimeter of 21.7km.

The fire then spread rapidly in a south easterly direction, mainly as a high intensity crown fire. By 2.30pm, it had increased to 5 819ha in size with a perimeter of 42.8km.

At about 3.00pm, police started to evacuate people from Dunalley to the local hotel and further south to Nubeena.

¹⁵ Tasmania Fire Service Fire Investigation Report, TFS Incident Number 201651.

¹⁶ Tasmanian Wildfires Report 2013, at p. 19.

The fire came on to the Blue Hills on the north east side of Dunalley and reached Dunalley at about 3.25pm. As it impacted on Dunalley there were a large number of embers which caused spot fires throughout the town. This is described by some TFS personnel as a massive ember storm which showered Dunalley and Boomer Bay. Crews defended the hotel where a large number of people were sheltering.

Dr Marsden-Smedley examined this phenomenon of the embers storm. While acknowledging that the exact mechanism driving it is unknown, he indicated that it was probably caused by the collapse of the fire's convection column and a reduction in the height and duration that embers are 'lofted'.¹⁷ A high intensity and fast moving fire would have a high convection column and be lofting embers high into the atmosphere, and when this form of fire reaches a lower-fuel zone, its energy would be reduced, in turn lowering the convection column. This means that the time embers were lofted would decrease, so that they would not carry so far and more would be still alight. An increase in spot fires would be expected.

People and vehicles evacuated from the Dunalley area and moved to Nubeena. Police and fire crews began evacuating people from properties along the highway and at Murdunna.

From Dunalley, the fire continued in a south easterly direction and by 5.30pm it was burning past Murdunna. Murdunna came under ember attack and fire crews defended properties. Multiple properties were reported burning at 6.40pm; at this time, the fire was about 9 623ha in size with a perimeter of 93.6km. There was a minor wind change from north westerly to



Image courtesy of Warren Frey

¹⁷ Tasmanian Wildfires Report 2013, at p. 49.

north north westerly which turned the fire to a south south easterly direction. This wind change, combined with fuel reduction the previous year in dry forest near the town, probably resulted in a lower intensity burn, which explains the lower proportion of houses lost in Murdunna compared to Dunalley.¹⁸

Falling power infrastructure blocked roads and made it difficult for crews to access areas further along the Arthur Highway.

As the fire front was heading down the Tasman Peninsula, between 3.25pm and 8.00pm the southwest flank of the fire spread towards Connellys Marsh and Primrose Sands and impacted on properties on the western side of the Forestier Peninsula.

The fire continued to burn in a south southeast direction along the Tasman Peninsula and by 11.00pm it had reached Eaglehawk Bay. It spotted across the Bay west of Cashes Lookout. At this time, it was about 15 322ha in size with a perimeter of 166.9km.

Some crews protected properties overnight and operations continued the next day.

A south to south west wind change moved across the fire ground between 1.00am and 2.00am on 5 January. This stopped the rapid spread south south east and caused the fire to spread towards the east northeast. At 8.30pm on 5 January, the fire scanned. It was about 19 692ha in size with a perimeter of 246.6km.



Photo courtesy of Oliver Torenus

¹⁸ Tasmanian Wildfires Report 2013, at p. 21.

On 6 January, large scale back burning occurred, mainly in the area north of Forcett. The fire was still burning actively on the Forestier Peninsula north of Hylands Road and back burning was being conducted on the property Bangor. The fire had continued to grow and by 9.00pm, it was 20 981ha in size with a perimeter of 269.1km.

Except for the eastern side of the Forestier Peninsula, the fire was largely contained on 7 January. It continued to burn on the Forestier Peninsula until 18 January progressing towards the east. The Forcett fire was described as contained on 18 January by Dr Marsden-Smedley, but declared to be contained by TFS on 27 January. TFS also declared the fire out on 20 March and the incident as closed.

On 18 January the final area of the fire was about 23 960ha with a perimeter of 309.9km. However TFS describes the ultimate size of the fire as 25 520ha.

Figures D.13 to D.21 show the progress and spread of the fire.

Figure D.13 Forcett -Dunalley Fire at 5.35pm EDST 3 January 2013.

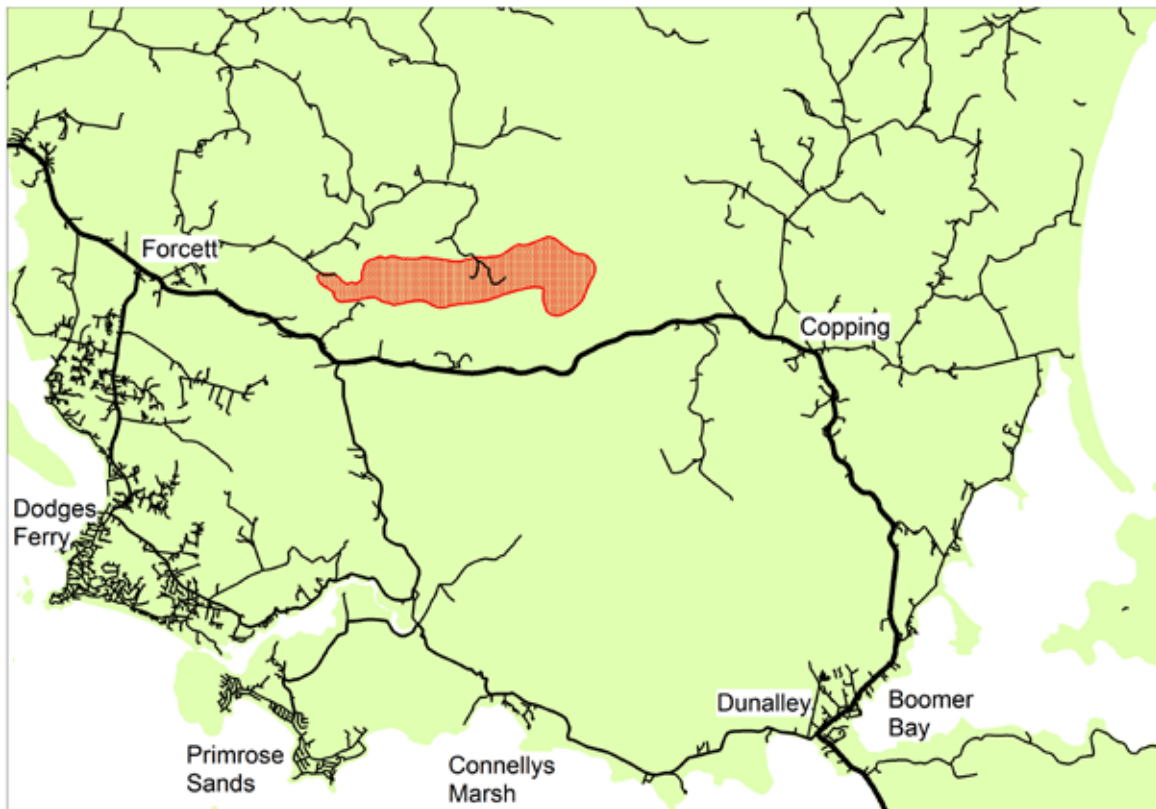


Figure D.14 Forcett -Dunalley Fire at 6.45am EDST 4 January 2013.

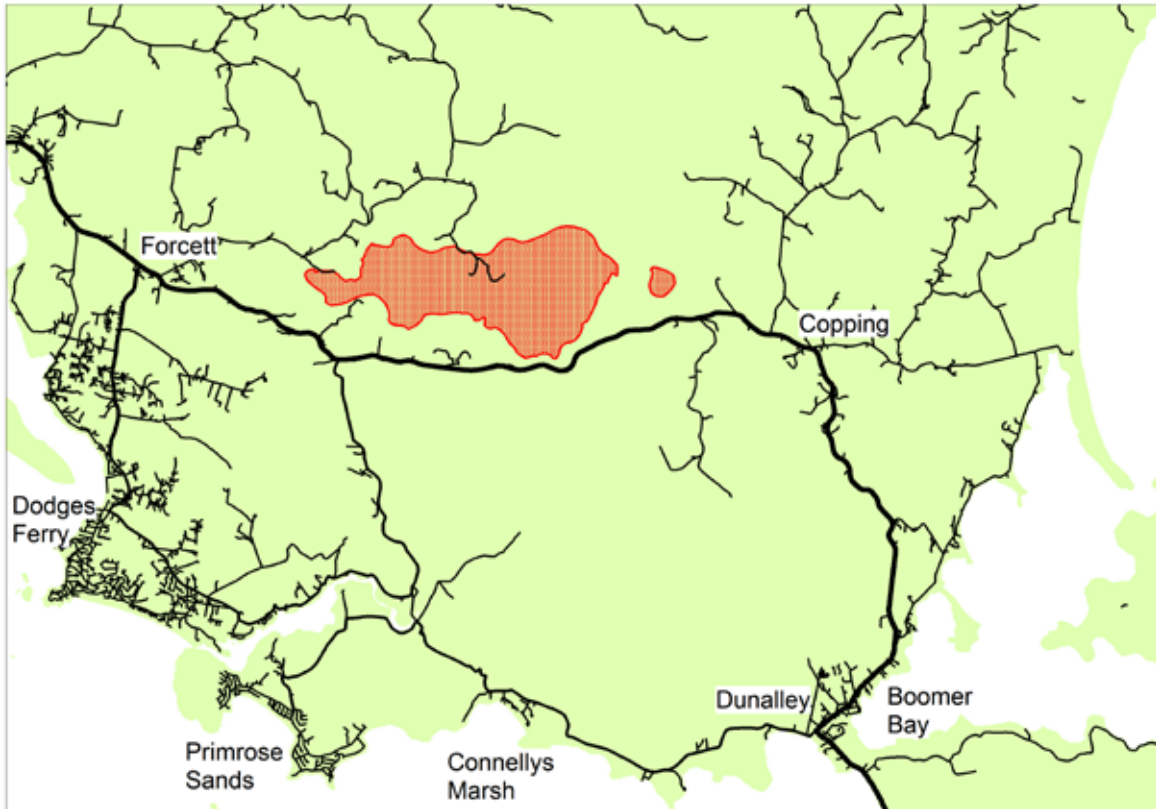


Figure D.15 Forcett -Dunalley Fire at 12.30pm EDST 4 January 2013.

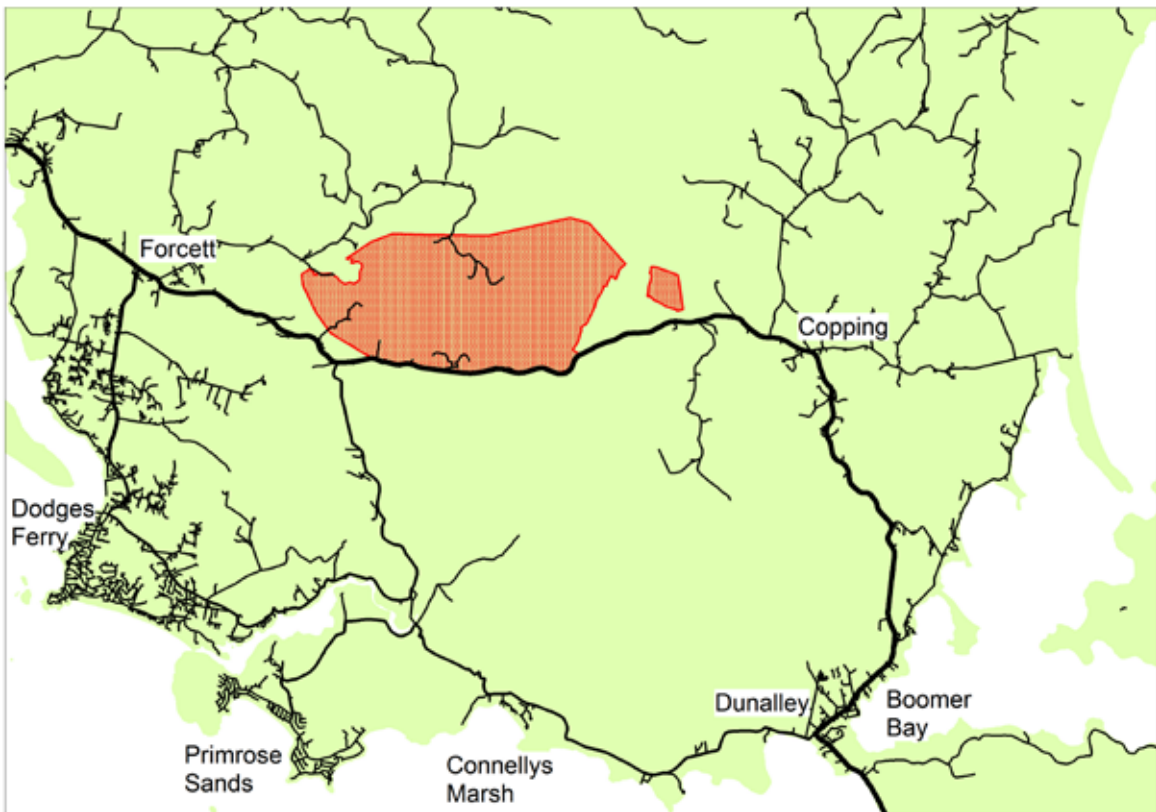


Figure D.16 Forcett -Dunalley Fire at 2.30pm EDST 4 January 2013.

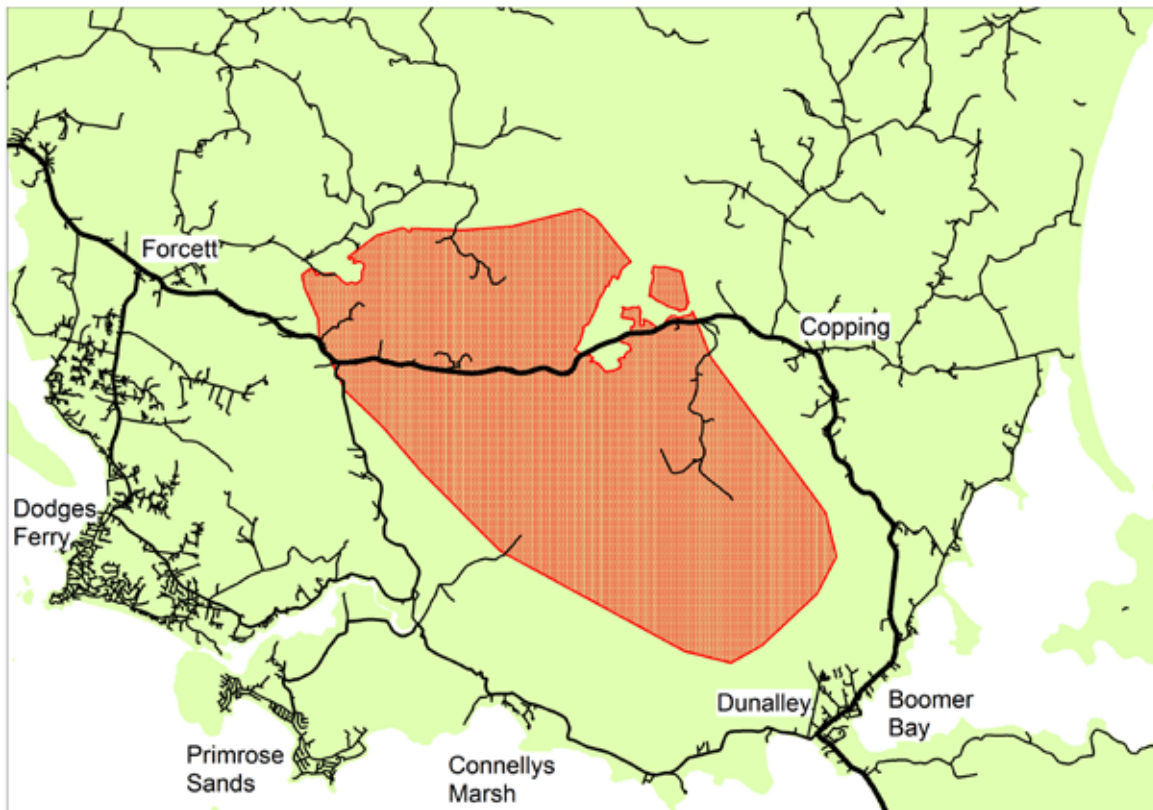


Figure D.17 Forcett -Dunalley Fire at 5.30pm EDST 4 January 2013.

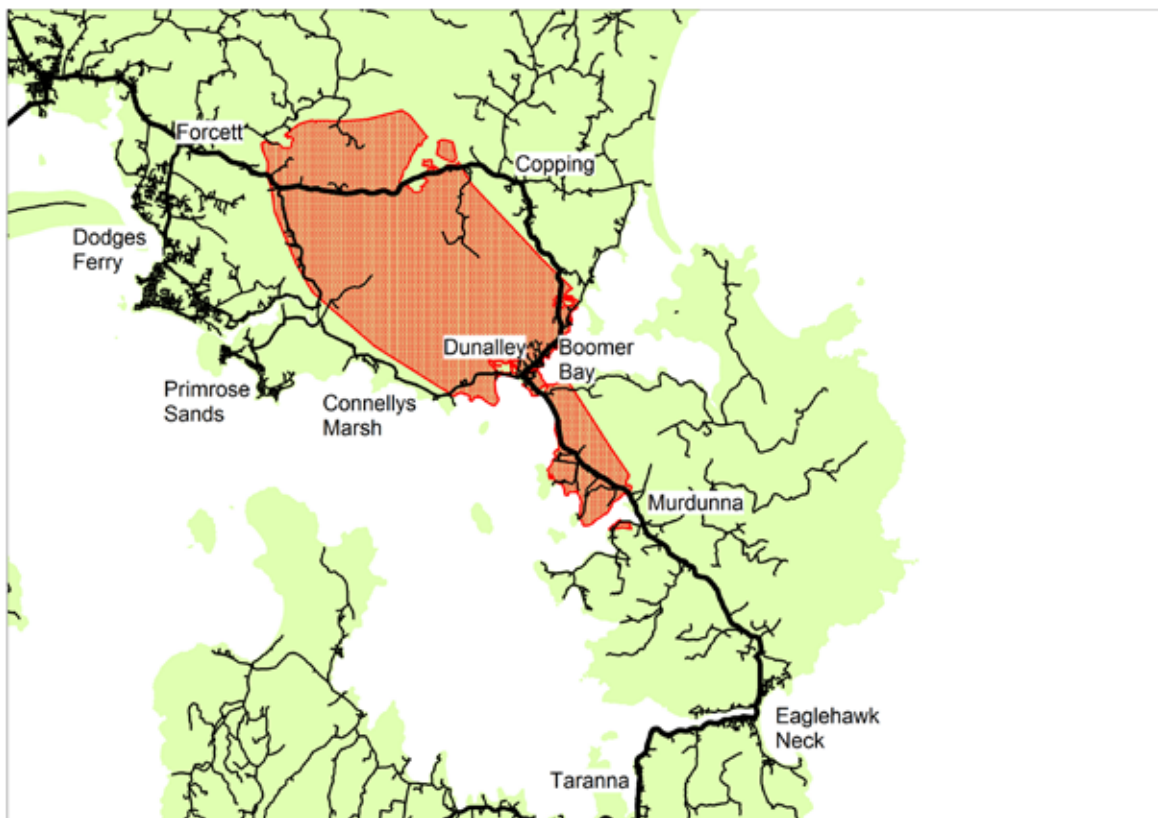


Figure D.18 Forcett -Dunalley Fire at 8.00pm EDST 4 January 2013.

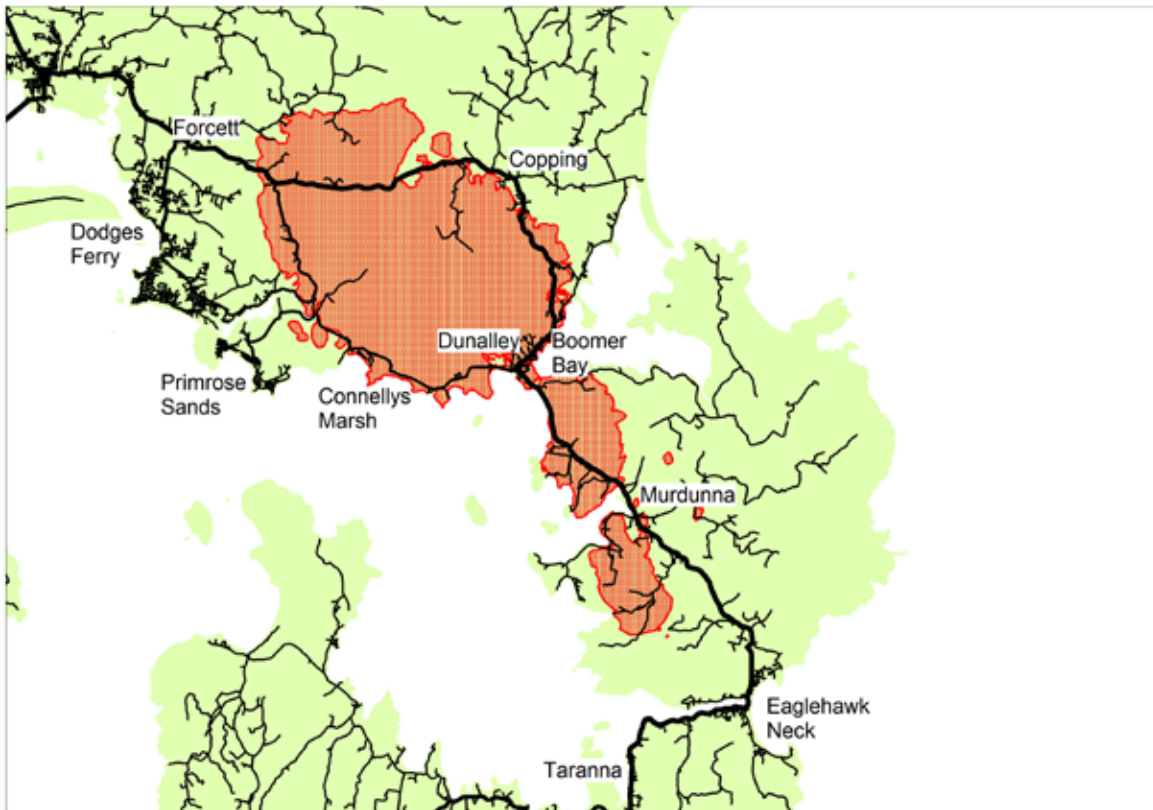


Figure D.19 Forcett -Dunalley Fire at 11.00pm EDST 4 January 2013.

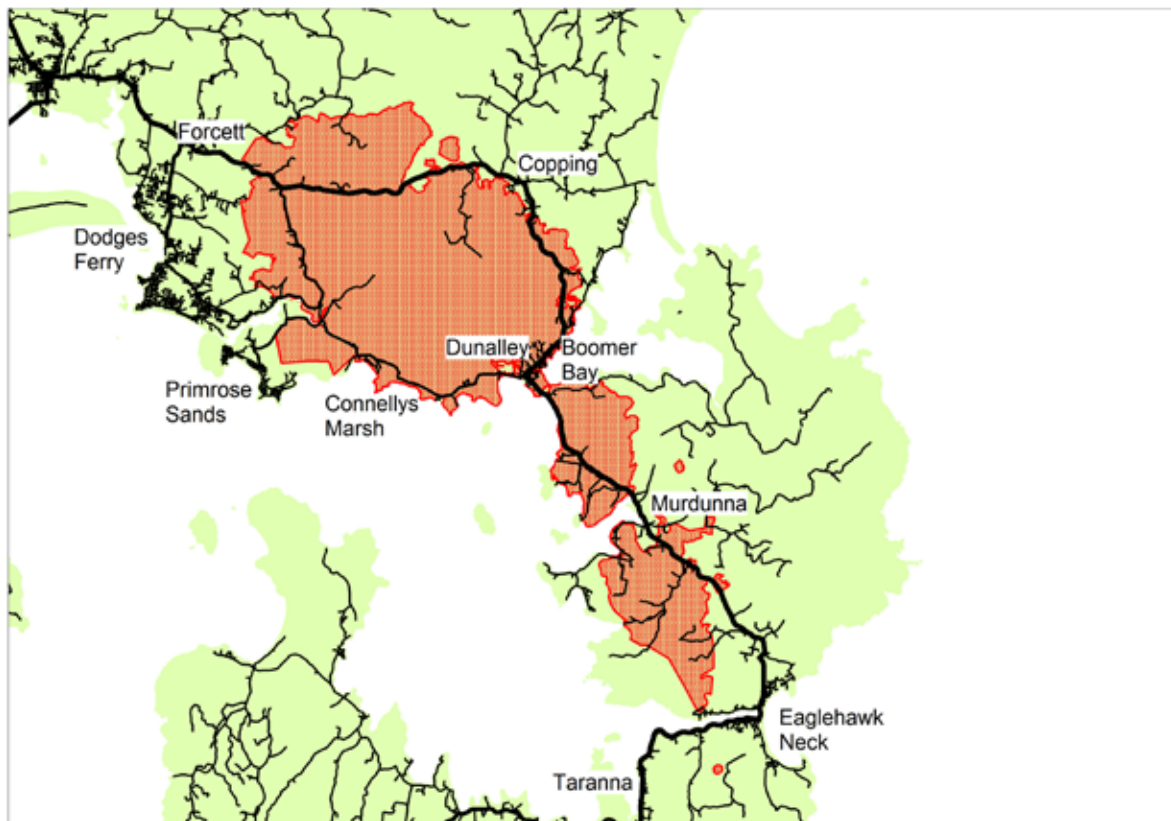


Figure D.20 Forcett -Dunalley Fire at 6.00pm EDST 10 January 2013.

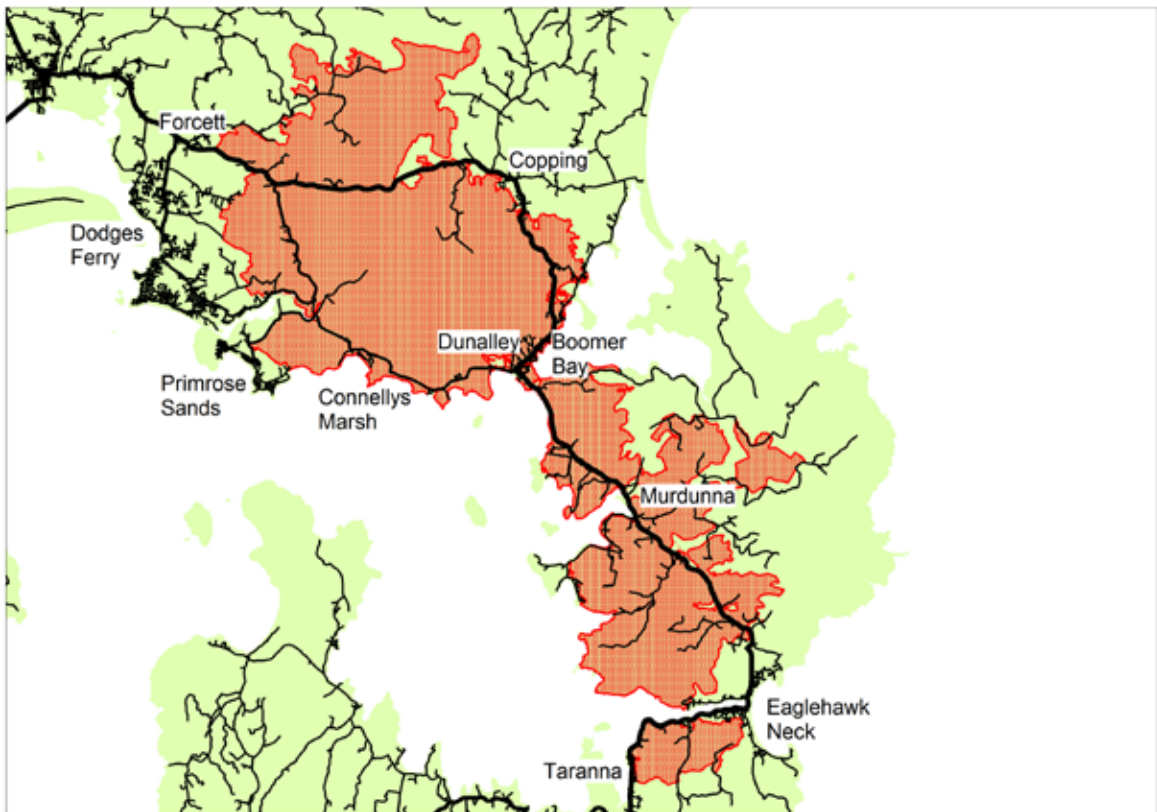


Figure D.21 Forcett -Dunalley Fire at 6.00am EDST 18 January 2013.

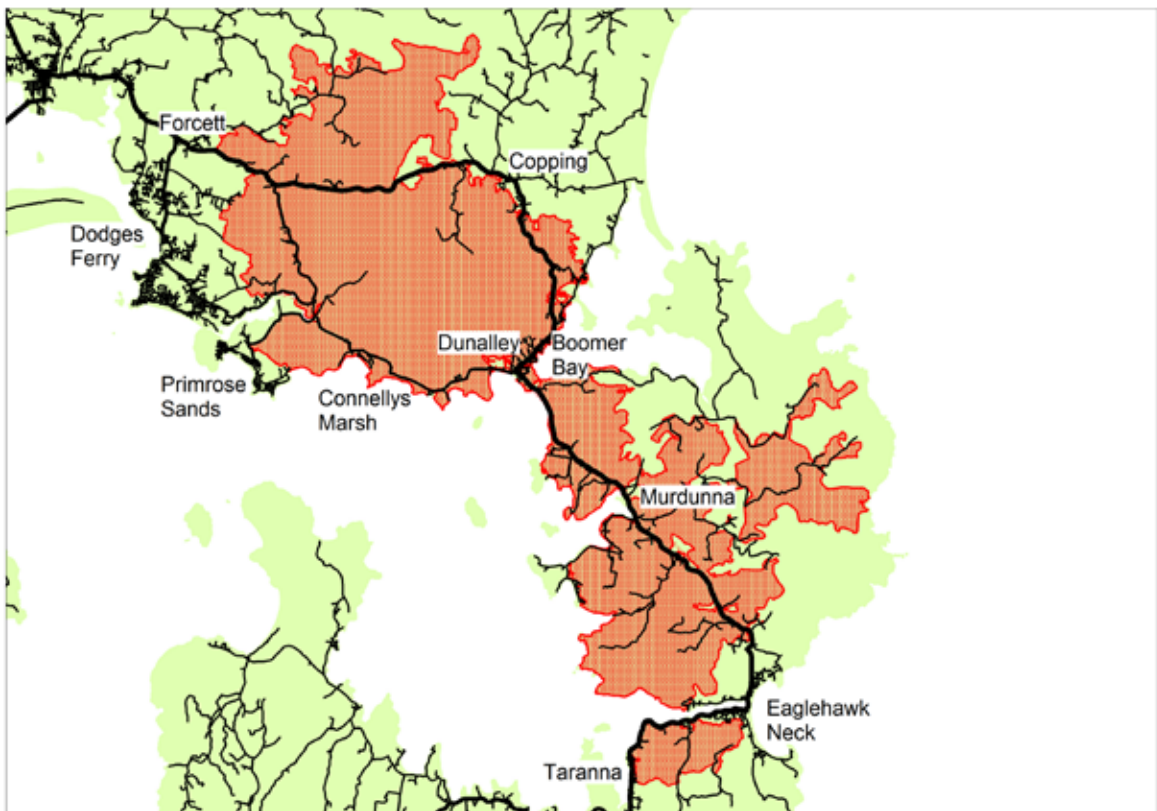




Image courtesy of Bernard Plumpton

The Bicheno Fire

On the evening of 3 January 2013, a large storm cell passed over the Bicheno area. A number of lightning strikes caused fires to start in several locations. Fires started shortly after 8.00pm at Lilla Villa, Butlers Point and Freshwater Lagoon. Other possible causes of the fires have been eliminated and the TFS investigation concluded that the lightning was the probable cause of the ignition of the Lilla Villa fire, hereafter referred to as the Bicheno fire.¹⁹

The Freshwater Lagoon fire was successfully extinguished and the Butlers Point fire was also said to be extinguished. In any event, it was later over-run by the Bicheno fire.

The Bicheno fire initially could not be located by fire crews. Once access was gained to the fire, crews initiated operations and used the landowner's bulldozer to cut a break around the fire. This helped fire crews gain access to the fire to extinguish and black it out. A large tree on the fire's perimeter caused some concerns. Several attempts were made to push the tree over with the bulldozer, but it remained standing.

Fire crews remained on the scene overnight and into 4 January to ensure the fire did not spot over into unburnt fuel. As the weather conditions deteriorated, the tree continued to cause concerns. A number of spot fires were quickly contained by fire crews on the scene.

Eventually the tree was pushed over by the landowner's excavator and the two crews in attendance started to blackout the tree. At around 3.00pm, both fire crews ran out of water simultaneously. As they were refilling their vehicles, the fire spotted over, and was well established by the time the crews had refilled.

The crews at the Butlers Point fire were warned along with the residents at Courland Bay. Police and fire crews immediately started to 'evacuate' these areas. Weather conditions made firefighting impossible. Approximately 1 000 campers and tourists were evacuated from the Isaac Point and Friendly Beach area by Parks and Wildlife Service.

¹⁹ Tasmania Fire Service Fire Investigation Report, TFS Incident Number 201693.

The fire spread rapidly towards the southeast, mainly as a crown fire, and reached Courland Bay at about 5.30pm and Butlers Point by 6.00pm. Properties were destroyed at Courland Bay and fire officers reported flame heights of up to 100 metres at the beach.

At 6.00pm, the fire was about 732ha in size with a perimeter of 15.3km. It continued to spread in a southerly direction and was scanned at 10.00pm, indicating it was about 2112ha in size with a perimeter of 29.0km.

By midnight, the fire burnt up to an area at Isaac Point, which had been the subject of a planned fuel reduction burn in March 2011. It was then 2 746ha in size with a perimeter of 29.5km.

Through 5 January, the fire spread to the west, crossing the control lines on Coles Bay Road between 1.00pm and 2.00pm. It threatened properties at Llandaff. Back burning operations were being conducted on the northern and north eastern sides to bring the boundaries out to safe edges.

Control line construction and back burning operations secured the northern fire line near Harveys Farm Road.

The fire continued to burn over the next few days and back burning operations continued to secure the boundaries. It was reported as contained on 9 January and TFS handed the fire back to local control on 11 January, with the incident closed on 22 January.

Figures D.22 to D.26 show the progress and spread of the fire.

Figure D.22 Bicheno Fire at 3.15pm EDST 4 January 2013.

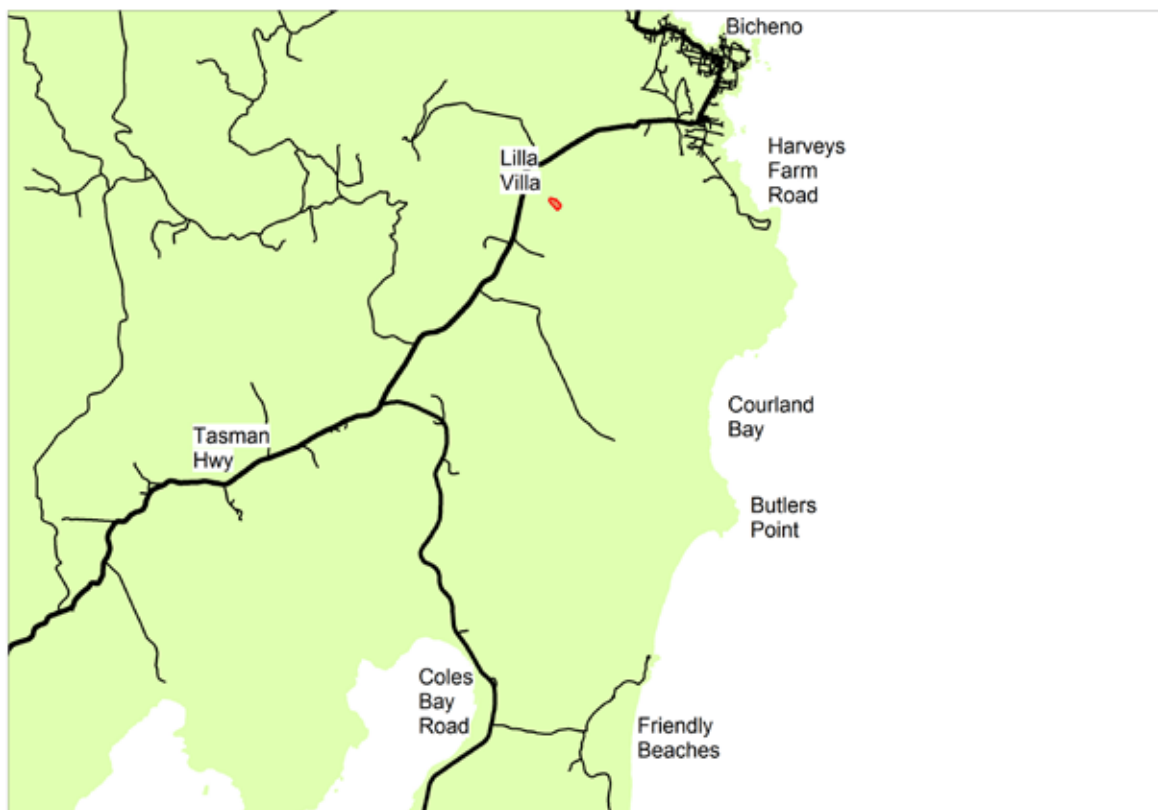


Figure D.23 Bicheno Fire at 6.00pm EDST 4 January 2013.

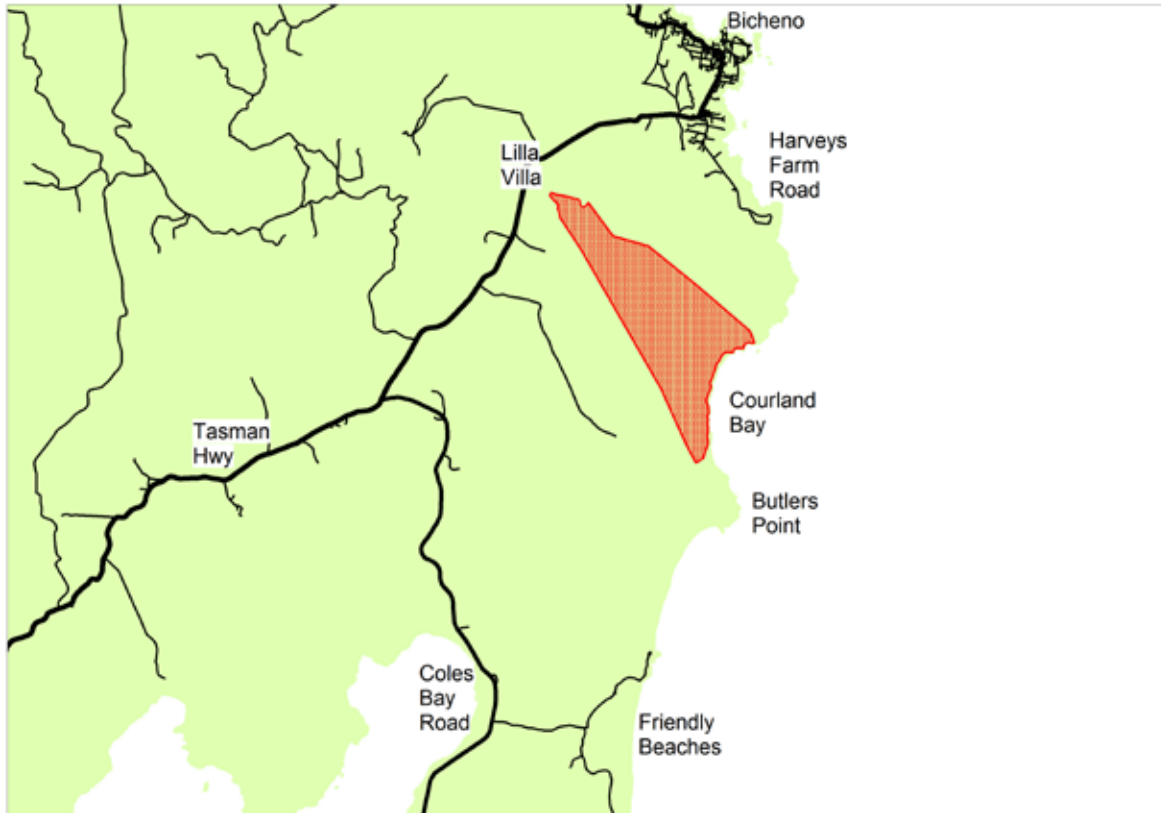


Figure D.24 Bicheno Fire at midnight EDST 5 January 2013.

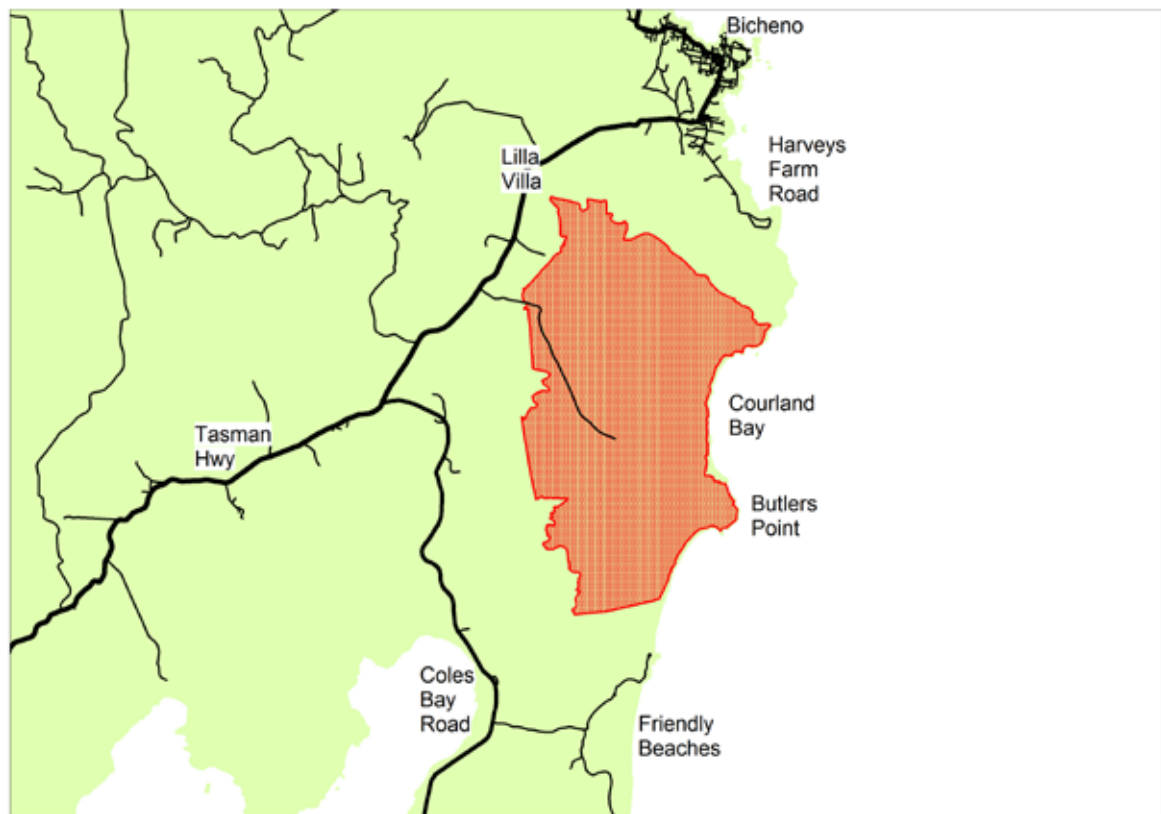


Figure D.25 Bicheno Fire at 7.00pm EDST 5 January 2013.

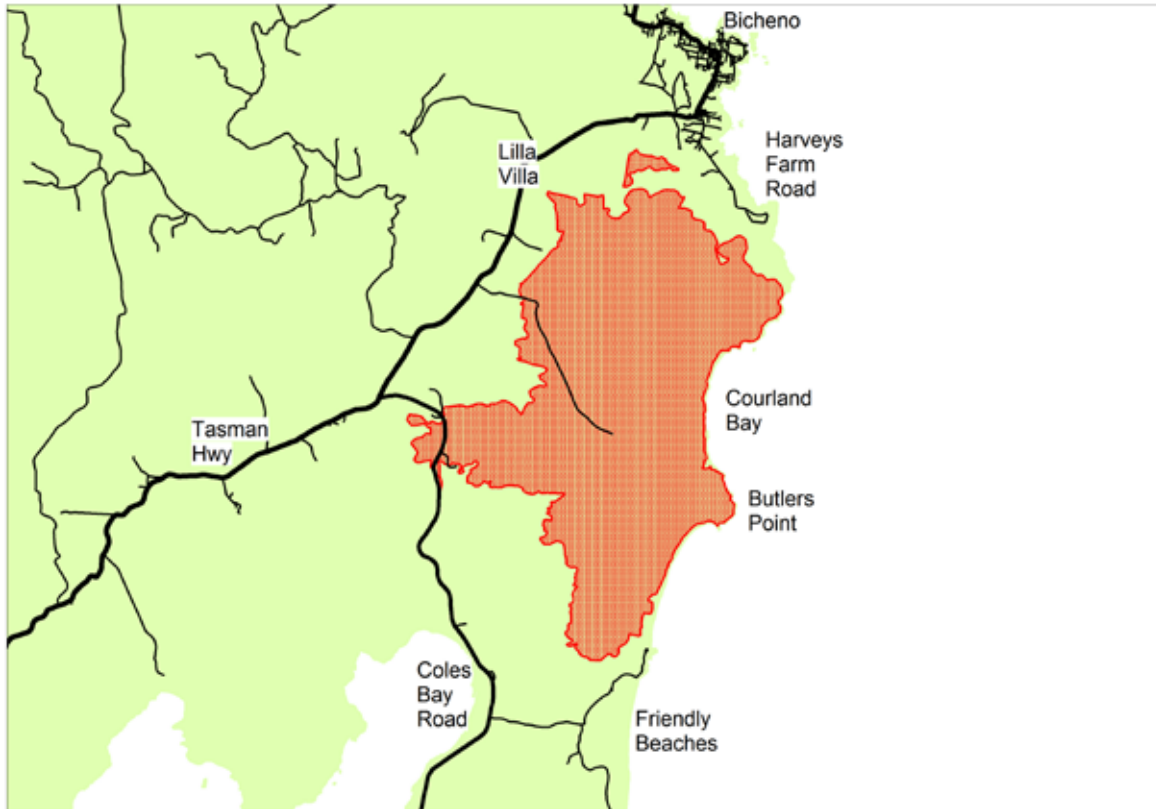
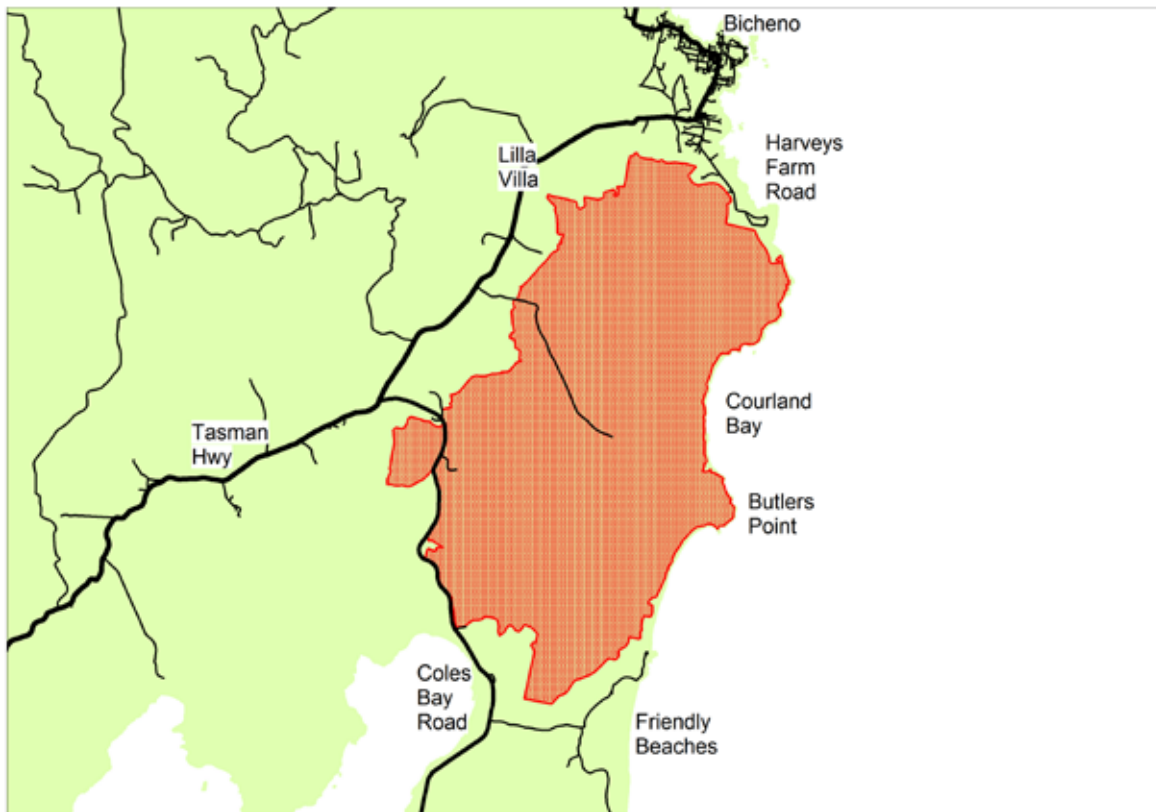


Figure D.26 Bicheno Fire at 11.00am EDST 9 January 2013 (final boundary).



Damage Caused by the Fires

No person was killed in the fires, but the physical, economic, social, psychological and environmental damage was substantial.

Unfortunately, a firefighter from Victoria died of natural causes during fire operations for the Forcett fire.

Much of the damage is not quantifiable and there is presently no aggregation of the financial cost available. Some of the personal costs may not be capable of being financially quantifiable.

Overall structural damage consisted of:

- 431 properties were damaged or destroyed
- of these properties, 203 residential buildings were destroyed
- 301 properties required the removal of a destroyed vehicle, outbuilding or house.

An outline of the damage caused by the fires is provided in the Tasmanian Bushfire Recovery Taskforce Interim Report. This report lists the damage that was assessable in February 2013, including:

- the Forcett fire caused the most damage in the Tasman and Forestier Peninsulas, burning through bushland, primary production and agricultural areas, and in the Dunalley, Boomer Bay, Murdunna, Eaglehawk Neck, Taranna, Copping and Connellys Marsh communities; 193 dwellings, significant infrastructure, such as the school and



Image courtesy of Warren Frey

police station in Dunalley, and 186 other buildings destroyed or seriously damaged

- the Bicheno fire burnt bushland and parks reserve; 10 dwellings and nine outbuildings were destroyed or seriously damaged
- the Lake Repulse fire burnt bushland, primary production and agricultural areas; four farm buildings and two caravans were destroyed
- stock and fencing losses and damage were significant in the primary production and agricultural areas
- there were negative economic effects for many businesses, including in tourism, livestock farming, wine, fruit and seafood industries.

The Tasmanian Farmers and Graziers Association estimated that approximately 662kms of commercial fencing and 10 000 head of livestock, mainly sheep, were lost.

Shortly after the fires in January, the Insurance Council of Australia reported that 410 claims had been received from policy holders and losses were estimated at \$42M. Since then, the number of claims has increased to 1797 and losses valued at \$80M. A breakdown of the claims is:

- average claim payout \$420 000
- 524 domestic property claims
- 862 contents claims
- 106 domestic motor claims
- 245 commercial claims
- 29 business interruption claims
- 31 other claims.

An estimate of the overall financial cost would be in the order of \$100M.

This estimate does not include the cost of emergency response and recovery operations or the myriad of consequential costs across the public and private sectors. Conservatively this would substantially increase the estimated cost, but it is currently not possible to provide a reasonable assessment.

A Comparison of the Weather Conditions with Other Significant Fires

In its submission to the Inquiry, the Bureau has provided a comparison of the weather for the fires being inquired in to with other significant fire events in 2006 and 1967.²⁰

Extreme or Catastrophic FFDR are rare but not unprecedented in Tasmania. A study by the Bureau of weather observations between 1997 and 2009 found that of 62 397 observations, only 18 reached the extreme range and only 8 reached the catastrophic range.

It is concluded that 4 January 2013 was one of the most significant fire days in Tasmania since 1997, and was second only to 12 October 2006 in severity, when the FFDI in Hobart remained above 100 for at least 90 minutes in the morning and again during the afternoon.

²⁰ Submission No 56, at p. 48.

The most damaging fires in Tasmania occurred on 7 February 1967, and the weather leading up to and on this day had both similarities and differences with 4 January 2013. Ground moisture was similar following a wet spring and during a hot summer. Leading up to these dates, antecedent temperatures 'differed markedly' as they were cooler than usual in the 12 months before the 1967 fires, but warmer than usual before the 2013 fires.

The day before the fires varied 'strikingly'. 6 February 1967 was a benign day, whereas on 3 January 2013, Severe fire danger ratings occurred.

On the days of the fires, there were also similarities and difference:

- on 7 February 1967, a Catastrophic rating occurred at about 3.00pm for around an hour, reaching an FFDI of 128 before a change occurred, which eased conditions. On 4 January 2013, the peak was an FFDI of 112 for about an hour; however, the Severe FFDIs occurred for much longer, starting before midday and continuing to near 7.00pm
- peak winds were stronger in 1967, but persisted for longer in 2013
- temperatures were higher in 2013, reaching 41.8 degrees in Hobart compared to 39.3 in 1967
- the change of weather was delayed in 2013 compared to 1967, allowing temperatures to be higher and Severe fire danger ratings to continue longer.



Image courtesy of Bernard Plumpton

The Use of Predictive Modelling

In the evening on 3 January, the Phoenix-Rapidfire system was used to forecast the behaviour of the Forcett fire on 4 January. These systems use data on weather and vegetation to simulate fire behaviour and provide an output which can be used to assist decision making in response operations, such as determining tactics, allocating resources and providing community information and warnings.

A Phoenix-Rapidfire simulation of the Forcett fire predicted it would run south east reaching Dunalley at 3.00pm on 4 January. The fire actually reached Dunalley following this path at 3.25pm on 4 January. However, westerly flanking fires were not predicted in the way they occurred. A comparison can be made by examining Figures D.27 and D.28.

Figure D.27 Phoenix - Rapidfire Prediction for 3.00pm 4 January 2013.

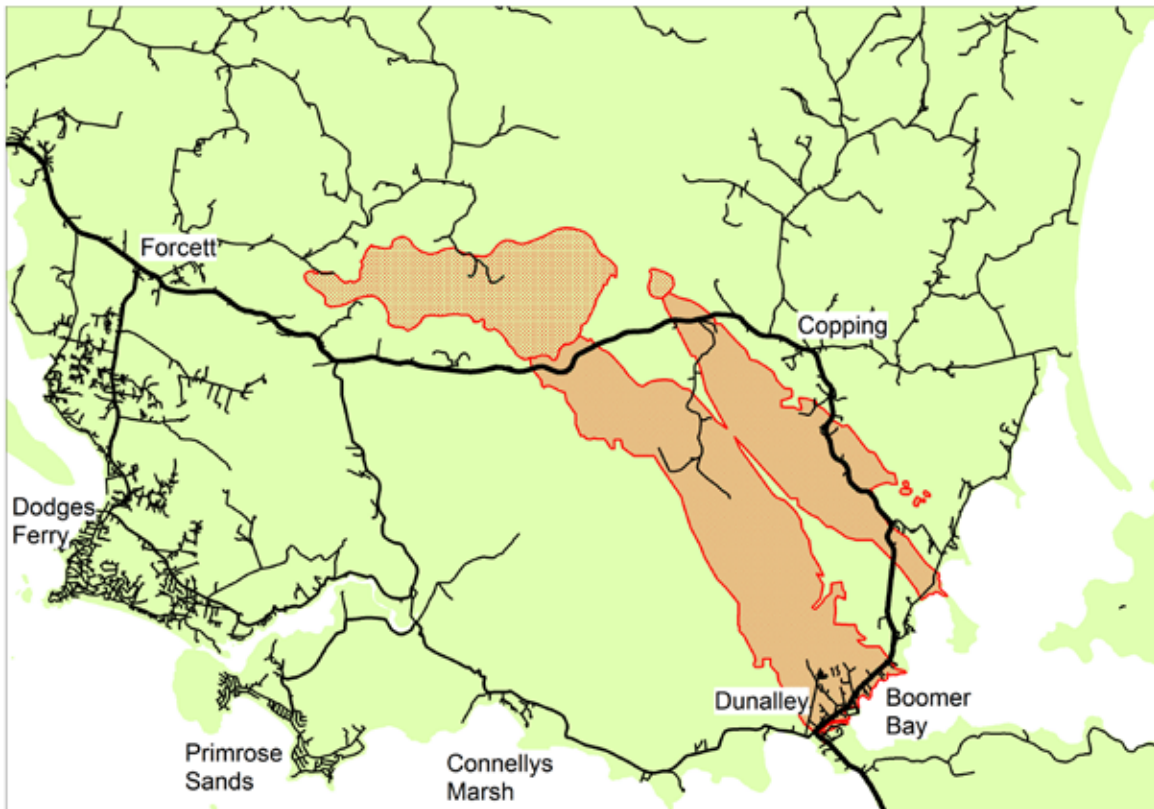
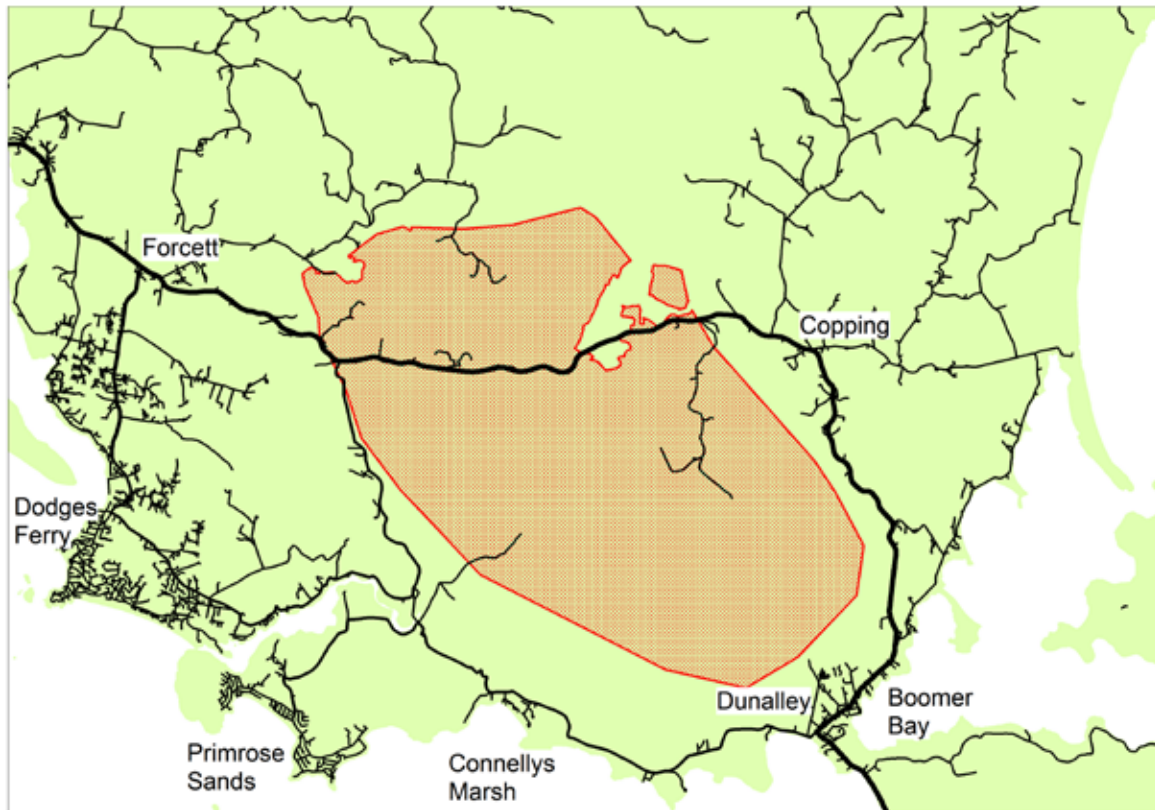


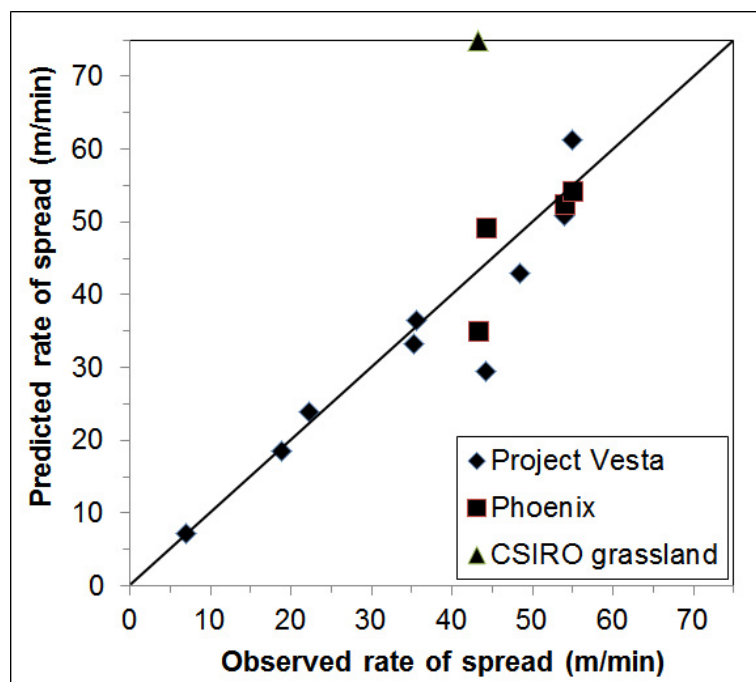
Figure D.28 Actual fire location for 3.00pm 4 January 2013.



An obvious question, and what determines their use, is: how reliable are the models?

Dr Marsden-Smedley has compared the fires on 3–4 January and some other fires, using a Project Vesta and the Phoenix-Rapidfire models. The overall correlation is shown at Figure D.29.

Figure D.29 Observed versus predicted head fire rate of spread.



For eight of the nine fires predicted using the Project Vesta model, there was a very close fit.

There was a large divergence for the Lake Repulse fire, which he explains as possibly being due to the night-time atmospheric de-coupling of wind speed at the Bushy Park and Ouse weather sites. Overall:

- the Project Vesta model slightly under-predicted head fire spread rate
- the Phoenix-Rapidfire model provided good head fire spread rate predictions, with slight over-predictions
- the Phoenix-Rapidfire model greatly under-predicted flank fire spread rates.²¹

Dr Marsden-Smedley told the Inquiry that there were two approaches to predictive modelling: one using the available models and another relying more on the expertise of an analyst who interprets the data and produces a map. Expertise for the latter process is more limited and, though there is still skill required, the use of models is an acceptable process. However, models are dependent on the quality of the assumptions made and data used in them, so expertise is still an important component.

Dr Marsden-Smedley also said that the Phoenix-Rapidfire model does not use local weather, but relies instead on Bureau forecasts.

Further, the models do not take into account atmospheric stability, as represented by the C-Haines Index. Dr Marsden-Smedley argues that the:

*main advantage of incorporating measures of atmospheric stability when predicting fire behaviour is that it overcomes a major shortcoming in all the fire behaviour prediction models currently utilised These models only incorporate the influences of weather, fuel and topography at the ground surface This means that it is not possible at the current time to make quantitative predictions of the increase in rate of fire spread and intensity expected when the atmosphere is unstable.*²²

Current models are likely to over or under predict fire behaviour in highly stable or unstable atmospheric conditions. In unstable conditions there will be higher rates of fire spread, intensity and a larger number of spot fires and spot fire distance.

Fire prediction models, such as Project Vesta and Phoenix-Rapidfire and the Forest Fire Danger Rating, could be used with the C-Haines Index to estimate the likelihood of realising the potential spread rate.²³

Concerns about the reliability and variability of the models are apparently reducing, and they have become more accepted over the past five years. The significance of a risk is a combination of the consequence and the probability of the risk occurring. In this sense it seems to the Inquiry that a simulation indicating a serious consequence ought to be acted upon, though there may be some doubt on the probability of it occurring.

21 Tasmanian Wildfires Report 2013, at pp. 50–52.

22 Tasmanian Wildfires Report 2013, at p. 11.

23 Bushfire Cooperative Research Centre Fire Note, Issue 109, May 2013

How TFS acted upon the information from the Phoenix-Rapidfire simulation that it received on 3 January was a matter of importance to the community, and was examined by the Inquiry.

Research continues in this field — the Bushfire and Natural Hazards Cooperative Research Centre is currently conducting a project on The Fire Impact and Risk Evaluation Decision Support Tool (FireDST)²⁴ — and it should be supported as having real potential to assist in fire management.

There is already a recommendation in this part covering the use of simulation models.

Fuel Reduction and Fire Behaviour

High intensity fires reached recently-burnt areas in each of the fires examined, and the head fire's spread rate, intensity and spotting was stopped or greatly reduced in each case.²⁵ This is a highly relevant outcome for the issue of fuel reduction in preventing or minimising the risk of bushfire (covered in PART I of this Report).

This has been described in this part, and further detail is provided in Dr Marsden-Smedley's report.

The Ability to Suppress the Fires

Dr Marsden-Smedley provides an indication of the ability to successfully suppress the fires through the initial fire attack. In his opinion, a combination of extreme levels of fire danger and atmospheric instability would have made the fires harder to control than normal and the likelihood of successful suppression action lower.²⁶

In the Forcett fire, when crews arrived at 2.30pm the fire was about 2.5ha in size with a perimeter of 0.7km. Taking into account the weather conditions, including a C-Haines Index of 9.6, and poor access, a successful initial attack would require 6 to 10 tankers (at least 4 heavy tankers), 20 to 50 fire crew members on hand tools and at least 4 medium helicopters.

With the Lake Repulse fire, fire crews arrived 28 minutes after the fire was reported when it was about 8.5ha in size with a perimeter of 1.2km. Taking into account the weather conditions, including a C-Haines Index of 6.7, a realistic requirement for a successful initial attack was 6 tankers (at least 2 heavy tankers) and aerial support from at least 2 helicopters.

The Inquiry is not able to determine whether Dr Marsden-Smedley's opinions on this issue are sound.

24 Bushfire Cooperative Research Centre Fire Note, Issue 109, May 2013

25 Tasmanian Wildfires Report 2013, at p. 53.

26 Tasmanian Wildfires Report 2013, at pp. 53 and 54.



Photo courtesy of Barry Davies

PART E – THE EMERGENCY RESPONSE

In accordance with its terms of reference, the Inquiry is required to report on ‘all aspects of the emergency response on 4 January, particularly measures taken to control the spread of the three main fires and to protect life, private and public property and essential infrastructure’.

Reference to ‘response’ in Tasmania Emergency Management Plan (TEMP) is descriptive and the function is not defined.¹ However, essentially it means action taken to prevent the development, escalation or continuance of an emergency event.

In examining and considering the response, especially considering the scale and impact of the Forcett fire on the afternoon of 4 January, it should be expected that there would be some initial confusion. By its nature, an emergency of this type will have high levels of disorder, uncertainty and poor information flows until there is appropriate control.

It is also imperative to make judgements on the situation faced by those responsible for responding to the emergency events, and to take into account that decisions are frequently made with limited information and under very stressful conditions. Hindsight and personal perspectives often distort what was realistic in the circumstances.

The response to any emergency event has the highest risk in the various aspects of emergency management for the people undertaking these activities, and it is essential to acknowledge the efforts of the many people involved in this way. There were many examples of selfless commitment to the wellbeing of others, and physical and moral courage in the decisions that were made, which should be a source of pride.

It is pertinent to reiterate that this Inquiry is directed at the ‘strategic, systemic and organisational level’ to identify areas of improvement so the community is adequately protected in the future — not ‘individual fault finding’. Commensurate with this, it is not necessary for the Inquiry to examine every detail of what occurred, and it has not sought to do so.

¹ Tasmanian Emergency Management Plan (TEMP) Issue 6 2009, at p. 27.

In this Part of the Report the primary focus is on fire and police response activities; the actions of other response organisations are dealt with at the end of this Part. This should not be taken to imply or suggest that those activities are not significant or important; rather, that the primary response activities are those of the fire and police services.

Keeping Records

The Inquiry had access to different forms of record, such as logs and personal notes, some of which were well maintained. However, there is no full documentary record of every action or decision available. This is due to a lack of recording systems, an inability to make records in a timely way in rapidly developing conditions, and the personal practices of the individuals involved. It is particularly evident in field operations, but it also occurred in areas where facilities should have been available. Even here it is understandable that events may overwhelm physical recording methods. Systems to overcome these problems should be established wherever possible.

Shortcomings in this area were highlighted in the management of operations in Tasmania Fire Service (TFS) Incident Management Team (IMT) for the Forcett and Lake Repulse fires, especially with emergency '000' calls, and in identifying the strategies and tactics used by fire personnel in field operations. These matters will be discussed below.

A project to address part of this problem has been established as a priority by the State Emergency Management Committee and is being managed by Tasmania Police (TASPOL). Not being able to share information between agencies real-time has been identified as a significant capability gap.

The Emergency Information Management and Sharing Project is developing a business case for acquiring an electronic system which could be used by multiple agencies during response and recovery operations to manage and share information in a timely, secure and efficient way. Specific project objectives are to:

- enable personnel, groups and agencies with command, control and coordination roles to maintain situational awareness during emergencies
- assist IMTs develop and execute informed, timely and effective objectives, strategies and tactics
- enable the timely and efficient execution of planning and logistics functions including situation reports, resource requests, supply, finance and facilities.

Obviously this project goes beyond the present issue of keeping records. However, in the process of achieving the above aims, it will help achieve that outcome as well.

Recommendation 2 – that police and other emergency service agencies establish and maintain effective recording systems for emergency operations.

Recommendation 3 – that if a sound business case is developed, the Emergency Information Management and Sharing Project be supported.

Fire and Police Resources in the Affected Areas

While TFS and TASPOL have a flexible resource approach to responding to and managing major incidents and emergencies (that is, they have a scalable approach), initial action is often from within the local resources. Accordingly, it is useful to have an understanding of what those resource arrangements are.

Tasmania Fire Service

The Bicheno and Forcett bushfires occurred in the East Coast Fire District, which is part of the Southern Fire Region.

Two career staff manage the East Coast Fire District: a district officer and a field officer. In early January, there was an acting district officer and the substantive field officer on duty.

There are eight volunteer brigades on the Tasman and Forestier Peninsulas and in the areas directly surrounding the Forcett bushfire.

The Bicheno bushfire was adjacent to the Northern Fire Region and there are four volunteer brigades in the area. Due to the potential of both the Lake Repulse and Forcett bushfire, control of the Bicheno bushfire was transferred to the Northern Fire Region on the morning of 4 January.

The Lake Repulse bushfire is in the Midlands Fire District, which is part of the Southern Fire Region. Two career staff manage the Midlands Fire District: a district officer and a field officer. Both officers were on duty and available during early January.

There are four volunteer brigades directly around the area of Lake Repulse.

Tasmania Police

The Bicheno and Forcett fires occurred in the South-East Division, which is part of the Southern Police District. A restructure of the Division and District, beginning 1 January 2013, combined the former Sorrell Division with Bellerive Division to create the new South East Division. A new divisional inspector began in his position at the same time.

There are three stations in the area of the Forcett fire: Sorrell, with 11 personnel (including two sergeants), and Dunalley and Nubeena, with one personnel each.

There are three stations in the area of the Bicheno fire: Bicheno with two personnel, Swansea with two personnel (including one Sergeant), and Orford with two personnel.

Responsibility for the Bicheno fire was transferred to the Northern District on 5 January 2013.

The Lake Repulse fire occurred in the Bridgewater Division. An Acting Inspector was the Divisional Inspector. There are three stations in the area: Bushy Park, Maydena and Hamilton, with one personnel each. Support was immediately available from New Norfolk with nine personnel (including one Sergeant) and Bridgewater with 26 personnel (including six sergeants).

It should be noted that not all of these personnel would have been available when the fires occurred.

Active Fires in the State and the Fire Risk

The fire risk for 3 and 4 January was significant.

Bureau of Meteorology personnel contacted TFS on 31 December about the expected fire conditions for 4 January, as severe fire danger ratings were expected for the South East and Upper Derwent Valley Districts. Contact continued over the following days as forecasts were updated. Fire ratings depicted in table E.1 were issued at 4.00pm the previous day, except for 3 January when they were updated at 8.30am.²

Table E.1

District											
	King Island	Furneaux Islands	North West Coast	Central North	North East	East Coast	Midlands	Upper Derwent Valley	South East	Central Plateau	Western
Thurs 3 Jan	High	High	High	Very High	Very High	Very High	Very High	Severe	Severe	Very High	High
Fri 4 Jan	Very High	Very High	Very High	Severe	Severe	Extreme	Severe	Extreme	Extreme	Severe	Very High

The ratings for the Upper Derwent Valley and the South East Districts were Severe for 3 January and Extreme for 4 January. However, there were significant ratings for other areas of the State. Total fire bans were issued for the Southern Fire Region on 3 January and for the State on 4 January.

A high fire risk was already being experienced by TFS over the summer period. Significant rainfall deficits leading up to and including October to December 2012 had led to a number of fires occurring.

From the beginning of November through to the end of December 2012, there had been 580 vegetation fire incidents recorded. Most were quickly extinguished, but a number became campaign fires.

From 3 to 5 January, there were 66 bushfire incidents recorded, seven requiring significant resource commitments by TFS. A number of these were major fires and they are set out in table E.2.

² Submission No. 56, at p. 53.

Table E.2 Major Bushfires that occurred on the 3, 4, 5 January 2013

Fire Name	Address	Date Started	Fire Size (Ha)	TFS Region
Lake Repulse	Dawson's Road	3/01/2013	11,609	Southern
Richmond	Middle Tea Tree Road	3/01/2013	168	Southern
Forcett	Inala Road	3/01/2013	25,233	Southern
Giblin River	South West	3/01/2013	44,522	Southern
Bicheno	Tasman Highway	3/01/2013	4,943	Southern**
Nubeena	Storm Lea Road	3/01/2013	334	Southern
Steppes	Interlaken Road	4/01/2013	1,481	Southern
Montumana	Speedwell Road	5/01/2013	3,167	North West
Buckland	Tasman Highway	5/01/2013	672	Southern

**Fire was managed by the Northern Region.

It is worth noting that for the fire risk and fires that started, TFS was required to consider risks across a broad area of the State and in multiple locations. On occasions it is not easy to forecast which fires will develop into major or significant ones, and consequently, what priorities to adopt in allocating resources.

On the evening of 3 January, TFS used the Phoenix-Rapidfire model to predict fire behaviour and was aware of the forecasted fire behaviour for 4 January (a more detailed discussion is provided on predictive modelling in PART C). It is sufficient to note here that the model was applied to the Forcett fire; the forecast and actual fire paths are depicted in the figures E.3 and E.4 below. The fire was forecast to reach Dunalley by 3.00pm and it actually reached Dunalley at 3.30pm. Flanking fires had a greater rate of spread than was forecast.

Figure E.3 Phoenix-Rapidfire Prediction for 3.00pm 4 January 2013.

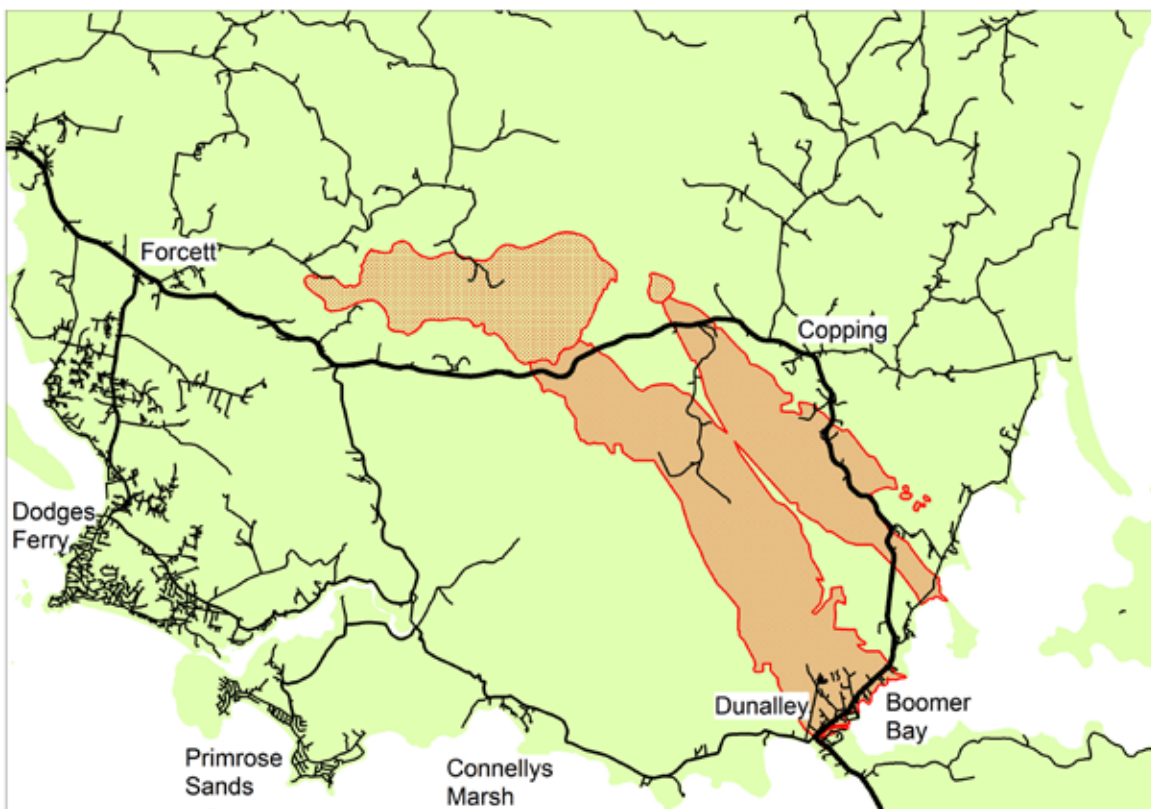
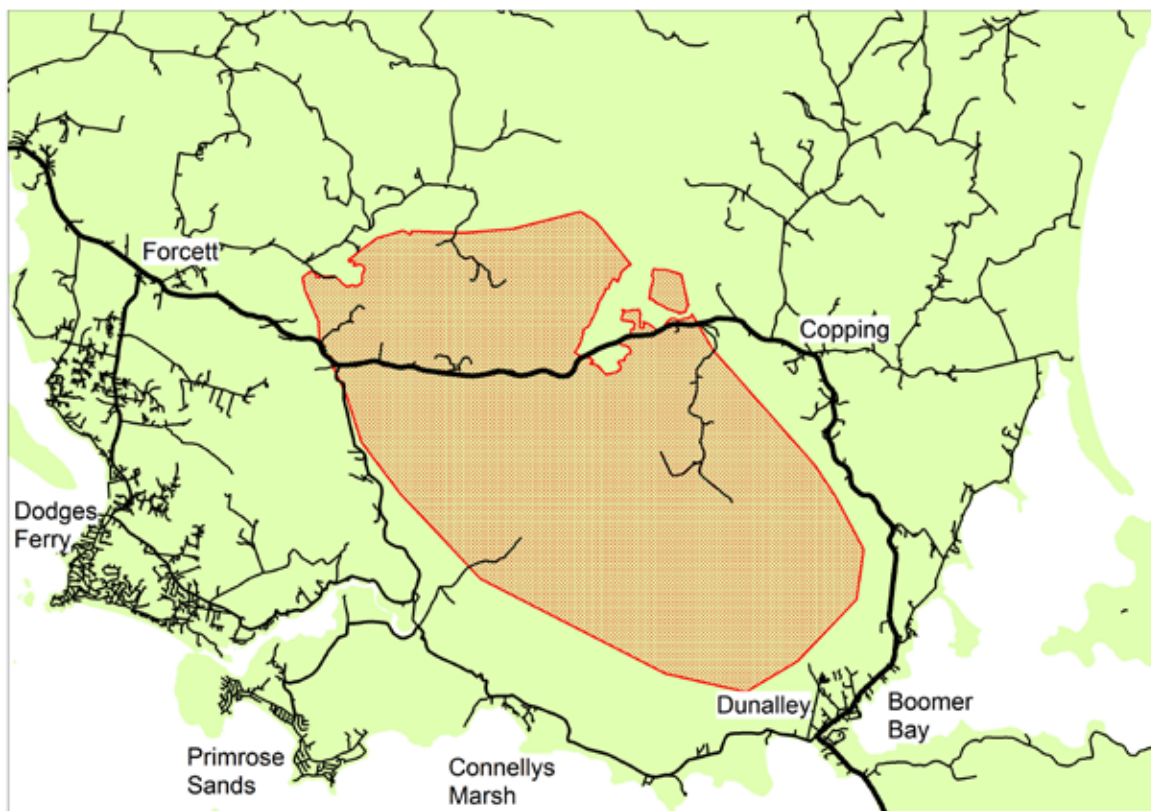


Figure E.4 Actual fire location for 3.00pm 4 January 2013.



Response Timelines

Schedules outlining the time at which key events occurred, and decisions and actions made, for TASPOL and TFS have been developed for each fire examined by this Inquiry. These schedules provide an overview and positioning of these events, decisions and actions, and they are attached at Appendix E.I. It should be noted that these schedules are not a complete record.

Establishing the Emergency Management Arrangements

Arrangements were established to manage the Lake Repulse, Forcett and Bicheno fires. Some of these arrangements were initiated early on 3 January, as part of standard procedures, before the fires started. This section of the Report simply describes these initial arrangements and their efficacy, where relevant, will be discussed in following sections.

Standard arrangements are implemented by TFS and TASPOL on days of Total Fire Ban:

- TFS tasks two brigade crews to every report of a fire, establishes and pre-positions strike teams (comprising a number of fire crews, according to risk) and sets up Incident Management Teams (IMTs) in each Regional Headquarters
- TASPOL increases the number of patrols in fire risk areas and initiates a program to monitor known or suspected arsonists.

The Inquiry was told this occurred in the Southern Fire Region and the Southern Police District on 3 and 4 January.

Forestry Tasmania, Parks and Wildlife Service (PWS) and paper manufacturer Norske Skog activate their own standing arrangements in response to the forecast weather conditions, and all did so for 3 and 4 January:

- Forestry Tasmania rostered on duty officers, increased fire tower manning, conducted fire patrols, and appointed standby machinery resources
- PWS pre-deployed personnel and a helicopter into identified areas, conducted fire patrols, and prepared daily fire action plans
- Norske Skog increased fire tower manning, conducted fire patrols, and placed resources on standby.

The various initial incident and emergency management structures are described in the following paragraphs. It should be noted that there were a number of changes as operations progressed, which have not been outlined here.

Tasmania Fire Service

Incident Control

A multi-agency IMT was established at 10.00am on 3 January at Cambridge. The North and North West Regions had small IMTs established to deal with initial action on fires starting. Some of these teams reported to the Regional Fire Controller in their respective Regional Fire Operations Centre.

The Southern Region IMT was given responsibility for the Lake Repulse fire at 1.00pm on 3 January. There was a fire commander in position at the fire.

The Richmond and Forcett fires started almost simultaneously. Both fires were managed locally on 3 January. The Richmond fire was contained on this day and later extinguished.

The Southern Region IMT was given responsibility for the Forcett fire early on 4 January. A fire commander was in place on the fire ground. Sector Commanders were positioned for specified areas until the fire crossed the Arthur Highway at around midday.

The Bicheno fire was managed locally on 3 January by PWS personnel and local brigades. At 10.00am on 4 January, the Northern Region IMT was given responsibility for the fire, though the fires were situated in the Southern Region. This action was taken due to the expected workload in the Southern Region.

Initially the fires were small and continued to be managed locally. A PWS officer was appointed as the Fire Commander to manage the fires.

The IMT established in the North West Region was precautionary as there were thunderstorms in the area. It was mainly staffed by PWS personnel. On 4 January it was disbanded as the resources were required elsewhere.

Regional Fire Operations Centre (RFOC)

An RFOC was established in all three TFS Fire Regions on both 3 and 4 January.

The Southern Region RFOC began around 10.00am on 3 January and was part of a regional briefing at 10.00am.

The North and North West Region RFOCs also began at 10.00am on 3 January.

State Fire Operations Centre (SFOC)

The SFOC began in the morning of 3 January and TFS Deputy Chief Officer was appointed as the State Fire Controller.

Tasmania Police

Police Forward Command Post (PFCP)

The Acting Divisional Inspector at Bridgewater Division established a PFCP at Bridgewater on 3 January and developed an operation for the Lake Repulse Fire.

In the South East Division, the Divisional Inspector was informed about the Forcett fire on 3 January and established a PFCP at Bellerive at 8.00am on 4 January. Command Posts were also positioned on 4 January: in the morning at Sorell, in the early afternoon at Nubeena, and in the evening at Dunalley. Other mobile posts were established at various locations, such as Primrose Sands, but they could not be described as Command Posts.

The significance of the Bicheno fire from a police perspective was not realised until the early hours of 5 January, and following that an inspector from the Northern District took active control. A PFCP was not established initially, as a flexible approach was taken to the location of command in the field.

Police Operations Centre (POC)

After a briefing at the SFOC at 3.30pm on 3 January, the Southern District Commander directed that the POC be established, with a capacity to be upgraded to a regional coordination centre if required.

Functional roles for the POC were identified and assigned early on 4 January and the POC was activated at 9.00am to manage the police response to the fires burning in the Southern District.

Southern Regional Emergency Management Committee (SREMC)

Some members of the SREMC were provided with a briefing at 8.30am on 4 January from TFS, outlining the fire risk for the Lake Repulse and Forcett fires, including modelling predictions. A further briefing was provided by TASPOL and TFS at midday, and the full SREMC met at 6.00pm that night.

The SREMC operated under a mission to 'coordinate and [oversee] emergency management and recovery in Southern Tasmania relevant to the bushfires'.

Security and Emergency Management Advisory Group (SEMAG)

The SEMAG met at 10am on 4 January and was provided with a briefing by TFS, again outlining the fire risk for the Lake Repulse and Forcett fires, including modelling predictions.

At a SEMAG meeting at 5.00pm that day, the State Controller highlighted the importance of having a single person in control. A decision was subsequently made to appoint the police Southern District Commander to be in charge of the incident.

Police Operations Commander

Until his appointment to be in charge of the incident, the Southern District Commander was the Police Operations Commander and the Southern Regional Controller. Another commander assumed the role of Police Operations Commander for this district for the duration of the fires.

The Northern District Commander assumed responsibility for the Bicheno fire as the Police Operations Commander at 8.00am on 5 January. To manage police operations, he:

- appointed an inspector to be responsible for each of the fires under his control, including the Bicheno fire
- established a Police Operations Centre at Launceston Police Headquarters
- positioned himself at the Northern RFOC so he could obtain more timely and detailed information on the fires.

Multi-Agency Control and Coordination

The arrangements in the Tasmania Emergency Management Plan (TEMP) were applied, but they were not the most effective for timely focussed multi-agency control and coordination arrangements.

There are two preliminary comments to make before discussing this topic:

- networking based on personal knowledge and relationships, while necessary and an important attribute, is not a substitute for sound structures, processes and systems. This comment was raised informally with the Inquiry on a number of occasions, suggesting that networking is an effective alternative to appropriate emergency management arrangements
- on 4 January, and for some time after that, not only were there fires over broad areas, with a devastating impact on communities generally and in particular, there was also the very real concern that there were multiple fatalities. There was sufficient evidence at that time to treat this fire as an emergency at the highest level.

The TEMP has a section on command, control and coordination in the part on response, and it indicates that the specified Management Authority has control at the scene of the emergency. Presumably it is intended that control would apply to all aspects of the response. In the case of these fires, TFS is the designated Management Authority. It is indicated as well that State authorities may assume overall control, including by the Regional Controllers or the State Controller.

The TEMP refers to coordination, with the advice that additional support for response can be provided through liaison with other authorised officers identified in the TEMP or by requesting a coordination centre be opened.³ Comments to the Inquiry indicated that coordination was achieved through liaison officers, briefings, networking and incidental to other activities.

³ TEMP, at para. 3.3.18.

Notably, the TEMP does not have any detail on how coordination might operate or formalised arrangements. It is apparent that response coordination is not seen as a specific functional requirement. There were instances where a more structured approach to coordination would have been beneficial, for example with evacuations, road closures and the Rapid Impact Assessment process.

The TEMP refers to control⁴, with the State controller assuming overall control of the response for 'a prolonged or significant State or national emergency'. Control in this case is described as being 'focussed on broader Whole-of-Government and community impacts of the emergency, rather than on the tactical management of the emergency itself', and that 'this work usually takes place at the State Crisis Centre with the SEMAG/SEMC members'.

The 2009 Victorian Bushfires Royal Commission examined the role of leadership and was concerned about divided responsibility and the need to identify a single individual who had clear responsibility for the control of the response to major bushfires. A number of comments by the Commission are relevant:

The Commission endorses this idea of an active leader: during a statewide disaster or an emergency it is this type of leadership that is needed ... strong leadership would have required not only the presence of the leaders at all crucial times but also the active oversight of those further down the chain of command ... "Active oversight" does not mean issuing directions to the incident management team ... rather, it means monitoring the activities of those with direct control of response activities, informing oneself of the situation on the ground and seeking information and feedback from subordinates. ...

Effective emergency management requires the successful execution of leadership functions at all levels, but it is the individuals with statewide responsibility, those who communicate and are accountable to government, to whom the highest expectations are attached. ...

... this delegation of powers and functions (formal or informal) does amount to an abrogation of responsibility or a transfer of accountability. ...

It follows that clear lines of authority for operational matters are necessary to support the command and control arrangements ...

The Commission observed a disturbing tendency among senior fire agency personnel – including the Chief Officers – to consistently allocate responsibility further down the chain of command, most notably to the incident control centres. ...

Nor is it either the Chief Officer's role to take direct control while the operational response is sound and incident-level management structures are operating effectively.⁵

This issue was being examined by the Victorian Bushfires Royal Commission in the context of multiple fire agencies managing fires. This situation for fire agencies does not apply here, as TFS

4 TEMP, at para. 3.3.20.

5 Final Report, Volume II, PART ONE, at pp. 75 – 79.

was the lead agency. There was no ambiguity about this arrangement in Tasmania. However, there is still a need to have a single-person responsible for ensuring all response operations are effective in a multi-agency approach, such as the State Controller.

This Report has previously raised that the legislation in Tasmania does not define the role and duties of the State Controller, and the TEMP only outlines the arrangements described above. Looking at the model and structures in place, it would be very difficult to achieve the active and applied leadership envisaged by the Victorian Bushfires Royal Commission for this position.

An emergency of this nature would suggest that the State Controller should have personally taken control. Having a State Controller appointed under the *Emergency Management Act 2006* must mean something. Duties are not specified in the legislation. However it is not unreasonable to assume that it was intended the State Controller would personally take control of certain emergencies.

The Deputy Commissioner of Police, who was the Acting Police Commissioner and State Controller at the time of the fires (and hereafter referred to as the State Controller), told the Inquiry that:

- he expected the State Controller should take statewide control where there was an impact on multiple regions or it was a complex and protracted emergency, to ensure a coordinated approach
- the State Controller was primarily responsible for everything.

The State Controller said:

- he took personal control, notwithstanding the appointment of the Southern Regional Controller to be in charge of the incident (which will be discussed below)
- he had regular meetings and contact with the Fire Chief and the Southern Regional Controller to stay informed
- he met with the SEMAG in the State Crisis Centre
- no issue was raised with him about the effectiveness of the arrangements, which he considered worked well
- that although SEMAG does not have an operational role, membership is the equivalent of the State Emergency Management Committee, and he met with this Group initially daily in the State Crisis Centre, as envisaged by the TEMP.

The issue of who was in charge was complicated by the appointment of the Southern Regional Controller to 'take charge'. Discussion on this occurred in a SEMAG meeting at 5.00pm on 4 January. From comments attributed to the State Controller when he raised this at the SEMAG meeting, it appears that his intention was to give effect to findings of the Victorian Bushfires Royal Commission (that there should be a person clearly in control). The Chief Fire Officer took issue with this.

Minutes of the SEMAG meeting at 5.00pm record 'SEMAG agreed that although TFS was lead authority for firefighting that the SREMC has lead for the overall recovery'. It is interesting that an advisory body, such as SEMAG, is purporting to make a significant policy decision like this.

The Southern Regional Controller, who was at the meeting, did not understand the decision in that sense. In the TASPOL submission to the Inquiry, which he prepared, this appointment was described as ‘... one single person in control of coordinating and overseeing the emergency response and recovery arrangements’.⁶ He told the Inquiry that he recalled the State Controller discussed with him at 1.10pm the need to appoint him ‘in overall command of the event’.

The apparent appointment was followed up with an email to the Southern Regional Controller at 6.30pm that day (a copy of which is attached at Appendix E.2), confirming:

... that as of the SEMAG meeting tonight the Acting Commissioner as the State Emergency Management Controller officially activated the arrangements for Southern Regional Emergency Management Controller to take charge of this incident as such he is operating under the State Emergency Management Act 2006. TFS will retain responsibility for the fire ground.

The fact that the appointment was made verbally and followed up with an email, in addition to the wording of the appointment, suggests that this form of appointment has not been considered in the State emergency management planning or prepared for. For instance, it would be expected that there would be a reference to it in the TEMP and some form of template prepared.

If it was intended to clearly designate a single person in control, there are difficulties with the wording of the appointment. To ‘take charge of this incident’ is clear, but there is no reference to which incident; the appointment is then qualified by the phrase the ‘TFS will retain responsibility for the fire ground’. It is difficult to understand how the appointee is to take charge of the incident if the fire ground is excluded. Consequently, the wording of the appointment is ambiguous and does not achieve its purpose.



Image courtesy of Bernard Plumpton

6 Submission No. 78, at p.8

It may well be that the appointment is expressed in this way because of objections raised by the Chief Fire Officer at the SEMAG meeting. The Southern Regional Controller told the Inquiry that when he discussed the intended appointment with the Chief Fire Officer, the Chief Fire Officer seemed uncomfortable with it. The State Controller explained that there was some discussion with the Chief Fire Officer who felt that he (the Chief Fire Officer) should be in charge. The State Controller's position was that TFS was the lead agency for the fire, but that the emergency was bigger than the fire (for example, including recovery). The Chief Fire Officer told the Inquiry that he did raise concern about another person being in charge of fire operations, and that he was not sure whether it was intended that the person be in charge of the Forcett fire or the Southern Region.

It is not clear to the Inquiry whether the minutes of the SEMAG meeting accurately record the SEMAG meeting. The Southern Regional Controller told the Inquiry that the minutes of the SEMAG and SREMC meetings don't reflect his appointment as the controller. It is noted that there is no list of attendees at the meeting and very little content on the conduct of the meeting.

Emergencies are not the occasion for disputes or uncertainty about who is in charge of command, control or coordination to occur.

The level of appointment reflects another problem in how this issue was conceived. A police commander is fourth in seniority down from the police commissioner, and nominating such a position to be in charge of the TFS Chief Officer would not be reasonable thing to do. This again raises the question of what levels emergency management responsibilities are set at for police.

Further difficulties arise if it was intended to appoint an overall incident controller. The term is not found in any plans or the emergency management legislation. It is possible that it was intended that the appointee would continue to be described as the Southern Regional Controller, now with a wider mandate. If this was the case, then it is difficult to understand why an appointment (as it occurred) was necessary. However, the major difficulty is whether the appointee could effectively perform the role envisaged, with or without the fire ground exclusion.

The State Controller also told the Inquiry that he considered he was in charge, which is difficult to reconcile with the fact of his appointment of the Southern Regional Controller to be in charge. More likely, the State Controller was reflecting the ongoing responsibility a person in a command position has when they appoint a delegate, rather than the active management of operations required of the person in charge.

There is no structure provided for in the TEMP for this role to operate at a State level; either for the State Controller or an appointment of this nature. The Southern Regional Controller continued to chair the SREMC and this was the primary focus for the discharge of the responsibilities of his appointment to the 'in charge' position. He considered that the Committee was responsible for supporting him in overseeing the emergency and immediate recovery arrangements, and that his appointment transformed it into a Coordination Committee.⁷ He informed the Inquiry that the 'SREMC had responsibility for coordinating and [overseeing] the management of the emergency which included the response and recovery arrangements'.

7 Submission No. 78, at p.10.

This Committee met twice a day for three days and then once a day, which would not have been adequate if the Committee had an active operational response role. Moreover, a committee, whether meeting frequently or not, is not the most appropriate mechanism from which to manage an operational response. Apart from being an inappropriate mechanism, attending committee meetings can consume valuable time with possible adverse consequences, highlighted in the section of this Report on the Initial Police Operations. A number of committees can also lead to duplication of effort.⁸

In reality, the role of the SREMC was to primarily concentrate on recovery operations. The Southern Regional Controller was able to meet regularly with the Police Operations Commander as their respective centres were physically alongside each other, to discuss police operational matters. Another aspect of their relationship is that they were of the same rank, again reinforcing the inappropriateness of the 'in charge' appointment. However, no difficulties arose in practice.

The Inquiry is surprised that for this emergency, police at higher levels did not have key leadership roles. When asked about whether a police officer at a higher level should have been appointed to this role, the State Controller explained that there were few senior police in TASPOL (they are the Commissioner, Deputy Commissioner and two Assistant Commissioners). The Inquiry is not convinced this is a satisfactory reason as, regardless of any other duties those officers may have, this emergency was the most important there was at the time for TASPOL. Effective leadership is important at all stages, but more so in the initial stages of an emergency. At this time, the most senior people would be expected to be in charge.

In summary, it appears to the Inquiry that the Deputy Commissioner, as the Acting Commissioner and State Controller, may have been continuing to take overall responsibility, but he cannot be regarded as being the designated person in charge of managing the emergency response to the fires as he had purportedly appointed the Southern Regional Controller to this role. The ambiguities indicate this was not an effective appointment and clearer arrangements should have been made. Given the nature of the emergency it would normally be expected that either the State Controller or another very senior police officer would have been in charge.

The emergency management arrangements being applied were consistent with that envisaged by the TEMP. However, a more robust concept of operations would improve the effectiveness and efficiency of emergency management. This will be discussed in PART J of the Report.

Recommendation 4 – that the role and expected duties of the State Controller be clearly defined in the Emergency Management Act 2006.

Recommendation 5 – that the State Controller (or an alternate if they are not available) be expected to personally take an active role in controlling and coordinating response and recovery operations, depending on the nature and scale of the emergency, and until other identified arrangements for ongoing operations are established.

⁸ Submission No. 66, at p. 2. Comment by the Department of Infrastructure, Energy and Resources on the duplication between SEMAG and SREMC meetings.

Recommendation 6 – that in multi-agency response and recovery operations, arrangements be made so it is unambiguous who is in charge of these operations.

Recommendation 7 – that a structure and facilities be established for the State Controller or other person managing multi-agency response and recovery operations.

Emergency Powers

The Inquiry has not examined the legal authority for normal fire operations. It has examined areas where the need for authority could be regarded as different from those operations — such as road and area closures and evacuations — and whether emergency powers were required.

Road closures

An issue arose concerning the closure of Arthur Highway for the Forcett fire during the morning of 4 January. This was done to limit the number of people coming into the Tasman and Forestier Peninsulas, given the single highway access.

Police:

- have authority to temporarily close any public street or restrict its use where an officer is 'satisfied that there is an obstruction or danger to traffic' or this may arise⁹
- may — or if requested by a fire officer, shall — close any street, road etc. in the 'vicinity of a fire'.¹⁰

These provisions may have been used by police depending on the proximity of any obstruction or danger or the vicinity of a fire. The requirements of the legislation may have been limiting factors in closing the Arthur Highway in advance of the fire, to restrict the number of people coming on to the Tasman and Forestier Peninsulas.

Following the initial impact of the fires, police sought to close various roads and areas. Again, the above limitations may have been an issue for ongoing operations in some areas, though there was clearly more scope for using these provisions.

Evacuations

Police may direct evacuations, in fire operations in respect to any person 'who is in or on any land or premises that is burning or is threatened by fire'.¹¹

Crime scene declarations

Police can make a declaration of a 'crime scene' or a 'serious incident site' under the *Police Offences Act 1935*,¹² and they did this on two occasions. The first was at 10.00am on 5 January where a Crime Scene Declaration was made, though there is uncertainty as to whether it was intended to use the crime scene provision. The reason outlined in the declaration notice was

⁹ Vehicle and Traffic Act 1999, at s. 56B.

¹⁰ Fire Service Act 1979, at s. 47(3)(a).

¹¹ Fire Service Act 1979, at s. 47(3)(c).

¹² Police Offences Act 1935, at ss. 63 and 63B.

more in line with a Serious Incident Site Declaration. This declaration was revoked at 2.10am on 7 January simultaneous with a Serious Incident Site Declaration being made, which itself lapsed after seven days. Copies of these notices are at Appendix E.3.

These declarations enable police to do a number of things in managing and controlling the areas prescribed in the declaration notice. For instance, police can close roads, direct people to leave and prevent people from entering the site (for more detail, see the *Police Offences Act*).¹³

TASPOL later obtained legal advice, which indicated these declarations were likely to be invalid, as it was not intended that they should cover such a large area as they purported to do so.¹⁴

Provisions in the *Emergency Management Act 2006* could have been used. Section 40 enables the State Controller to authorise the use of emergency powers set out in Schedule 1 of the Act. These include power to evacuate people and control the movement of people in any area. The Southern Regional Controller told the Inquiry that he did not consider it necessary to use the emergency powers in the *Emergency Management Act 2006*. Looking at the subsequent legal advice on the declarations made, it would have been advisable to have used the emergency powers provided in the *Emergency Management Act 2006* instead.

A process for the authorisation of the emergency powers is set out in section 40 of the Act. The State Controller must be satisfied that an emergency 'is occurring or has occurred' and due to that emergency there are 'reasonable grounds' for the exercise of the powers to protect people and property. It is not dependent on any form of declaration of emergency being made under the Act, but it needs to be specified or confirmed in writing and is limited to a maximum period of seven days. An extension for a further period of seven days is obtainable with the Minister's consent.

Significantly, the definition of 'emergency' in the Act includes an event which 'threatens' harm and is a 'significant threat of occurrence', and envisages action to 'prevent the possible resulting event' or 'mitigate the risks'.¹⁵ However, emergency powers in the Act do not appear to extend to a threatening event. This is an area that should be considered for clarification or extension.

A declaration of a state of emergency can be made by the Premier under section 42 of the *Emergency Management Act 2006*. However, the grounds on which a declaration can be made are very limited, as the Premier must be satisfied that other emergency powers are or may be insufficient without access to the special emergency powers which come with this declaration. In these circumstances, it is extremely unlikely that a declaration of a state of emergency would be justified except in the most extreme or unusual of emergencies.

Access to emergency powers is just one reason for declaring an emergency event. The Victorian Bushfires Royal Commission said:

the Commission considers that declaring a state of disaster would offer benefits beyond the grant of additional powers. First, it would provide symbolic recognition of the gravity of a situation – a recognition that on 7 February might have sharpened the focus of emergency services agencies on community safety factors such as warnings.

¹³ Police Offences Act 1935, at ss. 63A and 63C.

¹⁴ Letter to the Acting Commissioner of Police on 15 January from the Principal Legal Officer.

¹⁵ Emergency Management Act 2006, at s. 3.

Second, it would place the State's political leaders firmly in charge of the emergency, reassuring the public that their government had the situation in hand and facilitating rapid mobilisation of Cabinet and high-level government attention if required.¹⁶

It is also the Inquiry's experience that declarations of emergency serve a number of purposes, which includes conveying a clear message to those responding and dealing with the emergency and the community affected by the emergency and the community generally. For example, the South Australia State Emergency Management Plan sets out a number of considerations for making a declaration:

What is to be achieved by the declaration?

- *Full activation of State Plan including State and Zone Coordination Centres, and State Functional Service State Control Centres*
- *To support the Control Agency (Has a request been received from the Control Agency or the Coordinating Agency)*
- *Are further resources required?*
- *Is coordinated public information required?*
- *Are section 25 powers required for any agencies, including support agencies?*
- *To support recovery operations*
- *To signify seriousness of the event*
- *Is a determination required as to the Control Agency?*
- *To directly manage response and/or recovery operations.¹⁷*

It should be noted that this list applies to the needs of the South Australia legislation and Plan and therefore applies to the scheme of arrangement in place there.

The Victorian Bushfires Royal Commission also recommended introducing a graduated scale of emergency declarations.¹⁸ This approach is similar to the one that is in place in South Australia where a 'major incident' or 'major emergency' may be declared by the State Coordinator (Police Commissioner) or a 'disaster' may be declared by the Governor.

Coupled with this approach, it would be more appropriate in an emergency situation not to have to identify specific emergency powers and how they are to apply. Flexibility, certainty and timeliness are important and this form of arrangement would be more suitable to these occasions.

A number of advantages are available from this approach:

- a declaration can be pre-emptive in that it applies where an emergency has occurred, is occurring or is about to occur
- there is an identified trigger for emergency powers to be accessed
- emergency powers are all available and do not have to be individually specified
- declarations at the lower end have a more reasonable threshold
- having a process for activating State plans at a lower emergency threshold level

¹⁶ Final Report, Volume II, Part One at p. 86.

¹⁷ South Australian State Emergency Management Plan – Government Version, at p. 79.

¹⁸ Recommendation 13.

means that a more realistic exercising of these arrangements can occur in a State where significant emergencies are not common and arrangements are not coming from a 'cold start' should they escalate.

The second point is different from the current Tasmanian legislation, which seems to allow more direct access to emergency powers. The current provisions do still require the State Controller to make a decision on specific powers and then endorse their use through an instrument. In that way there is little difference in the mechanics required, but the substance is far more effective.

The final point is important in that it helps provide enhanced capability when significant emergencies occur. Indeed, it should be the practice of emergency services to activate State level arrangements wherever reasonable, to assist developing their capability, and plans should be made accordingly.

The Inquiry notes the comments on recommendation 13 from the Victorian Bushfire Royal Commission in the schedule of responses to the recommendations, in the attachment to submission No. 84, identifying that the current legislation replaced a graduated declaration approach. The Inquiry recommends this position be reconsidered.

Recommendation 8 – that the Government reconsider the current position on emergency declarations in the Emergency Management Act 2006 and the Act is amended to provide:

- *a graduated scale of emergency declarations*
- *the ability to make a declaration when an emergency has occurred, is occurring or is about to occur*
- *the ability for the State Controller (or whatever the person in overall control of response and recovery operations is called) to make one or more declarations*
- *a declaration to enable access to all emergency powers.*

Recommendation 9 – that the Tasmania Emergency Management Plan enable, and all organisations with a role in emergency management activate, emergency plans at lower threshold events to practice their arrangements and achieve a 'hot start' in escalating events.

The Influence of Communications Issues

As in most emergencies, there were difficulties with communications for the emergency services and the community, which was exacerbated by modern communication practices and expectations.

Note that TFS management of communication and emergency calls for IMTs will be examined in the section on the New Fire Arrangements and the effect of power and telecommunications issues on recovery will be examined in PART F.

Networks

TFS and TASPOL operate on different radio systems, although there is some prospect of interoperability.

TFS network is a wide-area talk group/system based on the administrative boundaries of fire districts. It uses a number of radio sites and frequency channels in the VHF 70–85 MHz band radio spectrum.

All TFS mobile and portable radios have a common channel plan, allowing access to radio channels operated by Forestry Tasmania, PWS, the State Emergency Service (SES), Ambulance Tasmania, local councils and private forest companies. There is also the ability to use a number of conventional alternate local channels as incident control channels where necessary. These channels, along with portable repeaters, can be used for large scale fires when required. The portable repeaters can be deployed to support incident management or pre-deployed as required.

The network also supports a paging system.

All brigades are fitted with radios and local exchange line (telephone) to ensure local communications are available in emergencies.

Regional communications are linked to the Emergency Communications and Dispatch (FireComm) centre.

All radio base site and control systems have back-up power. Remote sites have four day battery capacity.

The TASPOL radio network uses an EDACS (Enhanced Digital Access Communication System) trunked technology system. It operates in the 800MHz band of the radio spectrum. It shares this network with the SES and Tasmanian electricity entities.

Radio sites are interconnected so they can operate over wide areas, and multiple repeaters allow a number of radio transmissions to occur concurrently. All sites in the network are compatible with analogue and digital talk groups.

Mobile and portable radios are provided to vehicles and personnel. Operations are based on talk-groups, a linked group of users, rather than wide area channels. These are programmed in to the radios based on geographic areas or functional duties, and are selected by users as required or automatically occur when users move through different geographic areas. There is also a direct mode where communications can occur directly between radios.

TASPOL radios are connected to a call-taking and dispatching service as well.

Radio networks do not provide 100% coverage throughout Tasmania (which is a common issue for other jurisdictions) due to the rugged terrain in some areas and other radio communications obstacles.

In general, radio systems were effective for each agency, with some problems experienced in different locations caused by patchy coverage, overloaded systems, poor practices and a lack of operator knowledge on proper usage. Radios were the least effective form of communication in the Lake Repulse fire.¹⁹ These matters are well known to the agencies and it should not be necessary for the Inquiry to provide any recommendations on action that should be taken.

¹⁹ Tasmania Police, January 2013 Tasmanian Bushfires, Internal Debrief Report, at p. 25.

Of more immediate concern to this Inquiry is the lack of interoperability between police and other emergency services radio systems. One of the serious problems in most emergencies of any scale is a lack of awareness and knowledge of what is occurring in the field by those with management responsibilities and agencies other than the control agency. People within an agency at least have the ability to monitor radio traffic to achieve an understanding of what is occurring in the field. Other agencies, as a general rule, do not have this ability. Moreover, personnel from the different agencies do not have the capacity to communicate with each other in the field so they can respond to an emergency in a coordinated way and/or be protected from dangers which may threaten them.

This interoperability issue is well known within the emergency services and government sectors, but there are significant barriers to providing a solution, including the cost of introducing new technology and, sometimes, entrenched commitments by agencies to their own network.

Advice to the Inquiry is that a measure of interoperability is currently possible by developing an interface between TFS and TASPOL systems. Often there will be security issues for police in allowing direct access to their systems by other agencies or organisations. At present, there is the technical possibility of scanning some TASPOL communications, which is already a security weakness. There may be technological measures which can be taken to provide satisfactory security arrangements if systems are linked during emergencies.

The Whole of Government Radio Network project has been examining this issue in Tasmania for some time. The project concept is to develop a single radio network for government use, and agencies would transition from current separate radio networks over time to this single system. A new integrated network could be operating from 2020. From experience, the Inquiry is aware that the introduction of these systems can be significantly delayed because of cost and technical issues.



Image courtesy of Bernard Plumpton

In acknowledging the barriers to establishing an integrated system, options for achieving better interoperability should be explored, such as linking networks and cross-placing radios in vehicles and at locations between police and emergency services.

An associated project, the Emergency Services Computer Aided Dispatch (CAD) project, would also assist with interoperability and greater efficiency in emergency communications. The TASPOL Command and Control system was developed and implemented in 1989. There are support issues for the current system and it is operating on aged technology.

TFS operates under a different CAD system which does not have the same difficulties as the TASPOL system, but Ambulance Tasmania may need replacement technology.

A common CAD system is a matter the Government could consider in due course.

Mobile phones and internet

A compounding effect of these fires on communications, particularly for the Forcett fire, was the dependency on mobile phones and the use of the internet, and the loss of electricity power to key communication sites and within the fire grounds.

Police and emergency services personnel, whether as part of their organisations' policies or not, make a substantial use of mobile phones to communicate between themselves and their supervisors and managers.

The impact of the loss of communications varied depending on the location of the person using a mobile phone and the communications site, and whether or not it lost power.

Members of the community lost mobile communications in the same way and because of an inability to charge batteries. Some land lines, such as cordless phones, were also no longer operative.

As phone communications was lost, this limited the efficacy of the emergency alert messages. In addition to these effects, the loss of electrical power, telephone connections and batteries affected the ability to communicate and access information through the internet.

Recommendation 10 – that all agencies and the Government support moving to an integrated communications technology for police and the emergency services.

Recommendation 11 – that police and other emergency services examine options for achieving radio interoperability between them in the absence of an integrated radio system.

New Fire Management Arrangements for the Fire Agencies

New fire arrangements at management level were established for the 2012–13 fire season. These arrangements are examined in the context of those already in place. Fire strategy and tactics will be dealt with in a separate section. Concerns have been raised about the design, implementation and effectiveness of the new arrangements and some of the associated practices.

The new arrangements are modelled on the Australasian Inter-service Incident Management System and consisted of:

- a State Fire Operations Centre
- a Regional Fire Operations Centre
- Incident Management Teams.

These are discussed below.

State Fire Operations Centre (SFOC)

The SFOC was set up for the first time. Discussion documents were the only documents available on its role.

The SFOC is intended to support the State Fire Incident Controller (which is the Chief Officer or their delegate) where there is a significant emergency event or one is imminent, in the early coordination and management of the incident/s. It is also intended to support Regional IMTs when they are initiated.

Within the SFOC, the State Controller is supported by the State Fire Control Team, which consists of a number of functional roles such as operations, planning and information.

A written log of all critical decisions and actions is to be maintained.

Regional Fire Operations Centre (RFOC)

The RFOC model was trialled in various forms in regions over a number of years and this model was initiated in all Regions for the 2012–13 fire season. Documents relating to this initiative are a 2011 management proposal for a regional coordination centre and a management proposal dated March 2013, of which the Inquiry was assured was the extant document.

The model proposed a centre to coordinate response and suppression activities in a region when significant or multiple incidents occur.

A regional coordinator is appointed by the Regional Controller and a three tiered approach is taken to managing incidents:

- Level 1 incidents: a local incident controller is put in place, supported by the Regional Incident Control Centre (RICC)
- Level 2 incidents: a forward command post is established, with the planning and logistical needs performed by the RICC
- Level 2 incidents (significant) and Level 3 incidents: an IMT is appointed to a specific incident or complex of incidents. The RICC would continue to monitor activities and become a contact point for the IMT for regional resourcing requests.

The Inquiry was told that the RFOC does not have control of the fire and only acts to support the Incident Controller. When an IMT is established, the RFOC has a limited role in supporting the event as the IMT has resources to perform support functions. This begs the question of who the IMT and Incident Controllers are reporting to.

Functions for the RFOC are to:

- monitor and disseminate information on the weather, including predicted conditions and warnings
- provide initial planning and logistical support for developing Level 1 and 2 situations, including options and strategies during transitional command stages
- coordinate regional responses according to priority and threat
- liaise with other agencies
- provide web updates
- develop and disseminate community advice and alerts, in consultation with Incident Controllers
- assist IMTs with access to regional resources.
- provide status reports and advice to State and Regional commanders
- communicate with other RFOCs if they are established.

Primary reasons for the new model are to alleviate issues from the transition of command and to increase fire service preparedness.

It should be noted that there are no detailed documents (such as standard operating procedures) for implementing the new model. Instead, it appears this occurred through briefings to staff, including partner agencies, before the 2012–13 fire season.

Incident Management Teams (IMTs)

For the 2012–13 fire season, IMTs were centralised at regional headquarters rather than located nearer fire events as previously done.

Implementation of these new arrangements was an issue. This was identified in the Australian Fire and Emergency Service Authorities Council Audit Review (AFAC Audit) conducted following the fires.²⁰

The AFAC Audit considered the SFOC was effective in performing its role and contributed to the 'overall success of fire management'. However, the AFAC Audit identified a number of issues:

- a lack of finalised policy and procedures
- the high reliance on individual knowledge rather than formal process
- some confusion over changing roles between the Multiagency Coordination group and SFOC
- resourcing and people capacity to staff the SFOC and its associated structures

²⁰ AFAC Audit-Review, The Tasmanian Fires of January 2013, May 2013.

- the embedding of processes and knowledge within partner agencies; such as PWS and Forestry Tasmania.²¹

The AFAC Audit also commented on the importance of training in the new arrangements and finalising supporting documents, such as role statements; and that these implementation issues were mitigated to some extent by the good relationships TFS has with partner agencies through the development of inter-agency protocols and working relationships. Pre-season briefings were important as well and helped overcome the lack of documented detail.²² The AFAC Audit also identified the vulnerability caused by a lack of back-up staff for extended operations.²³

Similar findings were made about the RFOC.²⁴

The Inquiry endorses these findings of the AFAC Audit. For instance, in the Bicheno fire, there was confusion over the command structure, the form of support to be provided to the Divisional Commander (Fire Commander), and the quality of the mapping with Incident Action Plans (IAPs).

A PWS officer was notified of two fires at 4.20am on 4 January, one at Butlers Point and the other at Lilla Villa. TFS crews had responded to the Lilla Villa fire. He was told that he was a Divisional Commander for the Butlers Point fire and TFS were running the Lilla Villa fire. When he made an aerial observation he discovered the Freshwater Lagoon fire, which he took as well. With some other staff he began to manage his fires from a PWS office at Coles Bay, but was concerned that he was not getting support for logistics and preparing material, and later, to help evacuating people from the area. This may have partly been due to a misunderstanding of the role of the new IMT model.

At around midday on 4 January, the PWS officer was told that the IMT in the Northern Region had been set up and he was to take over the Lilla Villa fire as well. A TFS Group Officer had initially responded to the Lilla Villa fire and had control of this fire with the Bicheno Brigade Chief and the northern end of the fire ground. Though he continued with some rest breaks, he was not aware that the PWS officer had been allocated the Lilla Villa fire as well, even on 5 January. On 5 January, another TFS officer arrived and assumed control of this part of the fire, apparently without approval from the IMT. On 6 January, another TFS officer came in and 'took over' some back burning operations. There were also some interpersonal issues with the Bicheno brigade and animosity towards PWS personnel, which potentially may have had a negative impact on fire operations.

There was also concern from the PWS officers that Incident Action Plans (IAPs) they received over a number of days were limited and the maps attached were only copies of fire maps they had prepared and sent to the IMT. They also had to copy and distribute the IAPs they received. Communications with the IMT were poor and the staging area at the Bicheno fire station was not well used.

This situation highlights problems with IMTs being remote from fires.

21 AFAC Audit, at p. 22.

22 AFAC Audit, at p. 22.

23 AFAC Audit, at p. 23.

24 AFAC Audit, at p. 24.



Image courtesy of Bernard Plumpton

The AFAC Audit commented that the main area of concern for IMTs was the need to develop a good understanding of the changing role of the RFOC once an IMT is established. The AFAC Audit found there was some confusion, but the arrangements worked adequately during the fires.²⁵

An operational review was also conducted by TFS after the fire season. This also acknowledged that the concept of the new arrangements was 'not yet to be fully understood or practiced by all'. It concluded that '... it proved a model that suits the State of Tasmania and once embedded in the command and control culture of TFS and its partner fire fighting agencies is one that should serve the State well'.²⁶ The Inquiry is not as sanguine about the arrangements and is surprised that issues with continuity of line-of-control, incident action plans and communications for IMTs have not been considered.

Line-of-Control

The Inquiry was not able to clearly identify the line-of-control requirements for local incident controllers and IMTs. This is not documented and the Inquiry received conflicting views. If the RFOCs are only supportive of incident controllers and do not have responsibility for fires and a directive role, who does? Further, once fires are taken over by IMTs they are outside the RFOC structure and, regardless of what role the RFOC may have had, who do they report to? Is it the Regional Controller or the State Controller? And, for the control to be effective it must be a practical one, not a theoretical construct.

²⁵ AFAC Audit, at p. 24.

²⁶ Operational Review, Tasmanian Bushfires 2012/13, Tasmania Fire Service, at p. 24.

In Victoria, the fire agencies have agreed-on State Command and Control Arrangements for Bushfires, including a policy on line-of-control for bushfires.²⁷ This policy states:

The line-of-control refers to the connection between the Controllers at each tier of emergency management. The line-of-control for bushfire is Incident Controller, Regional Controller and State Controller and people appointed to these positions for the duration of the bushfire season.

The purpose of the line-of-control for bushfire in Victoria is to ensure an operational, informational and evaluative connection between the controllers at each tier so that the FSC (sic Fire Services Commissioner), who has legislative accountability for the control of major fire, is assured that the needs of the community are met.

Acting on behalf of the FSC, the State and Regional Controllers monitor the fire behaviour potential and possible consequences of all bushfires and exercise control, at their respective tier, over the potential of bushfires to become major fires. On days of high fire risk, State and Regional Controllers may exercise control authority, at their respective tier, over all fires.²⁸

The Victorian policy also makes the point that a necessary support mechanism for line-of-control is that:

Controllers at each tier of control must have a process for recording their decisions and those made within Control Teams and Emergency Management Teams, and a process for maintaining and storing these records.²⁹

The Australasian Inter-service Incident Management System also specifies that the Incident Controller is responsible for determining the appropriate strategies and developing an appropriate Incident Action Plan, and provides:

At a small incident, the Incident Controller may develop a mental Incident Action Plan ... Should the incident develop beyond that catered for in a pre-incident plan and standard operating procedures, so should the Incident Action Plan. For incidents that have a potential for extended involvement, the Incident Action Plan should be documented. However, during rapidly escalating incidents it can be extremely difficult for a written plan to be prepared in the initial stages. Nevertheless, an assessment of the situation should still occur and an objective be determined. As soon as practicable, a written plan should be prepared, in case the incident increases in complexity and to record the information for subsequent incident analysis and debriefs.³⁰

27 State Command and Control Arrangements for Bushfire in Victoria 2012, version 2, September 2012.

28 State Command and Control Arrangements for Bushfire in Victoria, at p. 5.

29 State Command and Control Arrangements for Bushfire in Victoria, at p. 11.

30 The Australasian Inter-service Incident Management System, Revised Edition 2011, at pp. 33 and 84.

Incident Action Plans (IAPs)

The instructions on IAPs include a one page summary option, and the procedure is to only use this:

At a Level 1 Fire – where a full IAP is not warranted. However, in these situations, there still needs to be clearly stated objectives for managing the fire, an understanding of who is undertaking each task, what the command structure is, and a briefing of safety issues.

At a larger incident where the situation has changed rapidly and the IAP prepared for that operational shift no longer applies. New objectives and strategies are required for the current shift of operations only.³¹

It would be a good practice to always make a written record — either after the event in a small incident, or in preparation for managing a larger event — and to embed it in organisational culture.

A written record of objectives, strategies and tactics was not consistently made by incident controllers in the field. This problem is compounded by the delay in preparing IAPs by an IMT. Difficulties are more than simply keeping good records. The Inquiry has been told IMTs should be forward looking and it takes 3 to 4 hours to prepare an IAP, sometimes even longer.

These difficulties are illustrated in the Forcett fire. A written record of this action plan was not made by the incident controller in the field, either on the evening of 3 January or in the morning of 4 January. There were discussions with the IMT for the Lake Repulse Fire, based at the Southern Regional Headquarters at Cambridge, during the evening on 3 January, to take over the Forcett fire. Advice to the Inquiry varied as to whether the IMT took over on 3 January, but did not begin preparation until the morning of 4 January, or did not take over until the morning of 4 January. In any case, work to prepare an IAP for the Forcett fire did not begin until the morning on 4 January.

The IAP was approved by the Incident Controller, now in the IMT, at 1.00pm — too late to be delivered and implemented before the fire ran out of control. Effectively, this meant there was no documented plan for the Forcett fire at this time, despite TFS having been called to it almost 24 hours earlier. It also meant that the only plan operating at this time was the mental plan developed by the Fire Commander in the field and/or the application of TFS Six Operational Priorities (these are discussed below in the section on fire strategy and tactics).

Looking at how long it took to prepare an IAP in an IMT, the Inquiry sought information on opportunities to prepare a quicker and simpler plan. The summary template, referred to above, is available, but was not used in this fire, despite the weather forecasts and predictive modelling. In its report, the AFAC Audit found:

... the IAP Summary template was evident for the Dawson Road – Lake Repulse fire, [however] there was no documentation provided to demonstrate its use on the first active day at any of the other fires, when such a summary should have been available.³²

31 Incident Action Plan summary document Version 1.2 November 2010, at p.1.

32 AFAC Audit, at p. 26.

Obviously this reflects serious problems with the transition from a field incident controller to an IMT. This is even more concerning with the line-of-control issues referred to above. A failure to solve this problem could lead to an over-reliance on the Six Operational Priorities, rather than developing plans specifically for the conditions of particular fires, and a poor fire management culture.

A quicker process for developing and documenting fire plans should be found.

However, deficiencies in planning do not mean that there was no control from the IMT. Subject to communications issues, the operations officer would normally have direct contact with the incident controller in the field and can give advice and direction to them as required.

Concerns were raised with the Inquiry on a number of aspects related to the importance of local knowledge and experience in suppressing fires, particularly in the initial stages. This issue is relevant to the new approach to centralising the location of IMTs, sometimes quite remotely from the fires they are managing. Locating an IMT some distance from a fire would reduce the chance of people within the IMT having an understanding of the local topography and conditions, and what is occurring with the fires.

An inquiry by a Senate Select Committee in 2010 examined the issue of local control during bushfires.³³ In considering this issue the Committee was focussed on the importance of early response to successful fire suppression.³⁴ Two comments by the Committee are pertinent:



Across Australia, 2010.

Image courtesy of Warren Frey

34 Senate Select Committee on Agricultural and Related Industries, at p. 107.

The committee received considerable complaint about the negative consequences of restrictions on local decision-making and local action once control of a bushfire suppression effort has passed to a centralised incident control structure. The basis for this complaint was the inability of locals on the ground to exercise their local knowledge and respond quickly to changing circumstances hampers bushfire suppression.

The committee understands that bushfire emergencies do require a formalised incident control structure to ensure that suppression measures in one area are not countering efforts in another or risking the lives of fire fighters. However, it appears ... that this objective is impeding the legitimate actions of fire fighters on the ground, who are attempting to deal with changing conditions in the most effective way. The benefits of a centralised incident control structure are totally nullified if fires are allowed to burn out of control while local fire fighters wait for approval to respond by those likely to be unfamiliar with local and up-to-date conditions. The committee is of the view therefore that bushfire agencies should review their incident control management systems to 'better incorporate local knowledge and expertise and better understanding of the needs and circumstances of local rural communities in the management of major bushfires'.³⁵

A related matter was referred to in the AFAC Audit; namely, the use of volunteer members in TFS management areas. This was put in the context of limited resources being available to TFS. The Inquiry understands that a volunteer brigade member was used in a planning role in an IMT during the fires, and this might be a means of supplementing resources as well as building local knowledge capability within IMTs.

Associated with this is the command structure at fires. For example, fire grounds can become divided, with a number of divisional commanders appointed. Having a single person in control at the fire ground is important for line-of-control and it could also be a means of bringing local knowledge into IMT decision making. This could be achieved by locating an experienced local brigade officer with the person in charge of the fire ground. The Inquiry is aware that this practice occurs frequently with TFS officers in the field; for example, a sector commander in the Forcett fire took a local brigade officer with him in his vehicle. A more structured and systematic approach would be of benefit.

Predictive modelling was a new capability for the IMTs and the failure to use this form of information effectively in the Forcett fire will be commented on in various parts of the Report. It does not appear that the IMT used the simulation for the Forcett fire, possibly due to their late take-over of this fire.

Communications within the IMTs

The Inquiry received complaints from TFS personnel in the field, particularly with the Forcett fire, that they had difficulty communicating with the IMT. The radio operators had little understanding of operational requests and issues raised by TFS personnel; TFS personnel received little response to their requests. Communications personnel in the IMTs were not the normal FireComm operators, but volunteers brought in for the task.

35 Senate Select Committee on Agricultural and Related Industries, at pp. 112 and 116.

The Inquiry was also told that emergency calls received by FireComm were referred to the IMTs for attention on pieces of paper and there was not a logging system in place to account for their management. Radio channels used by the IMT were not always audio-recorded as the FireComm channels are. Communication issues between FireComm and IMT communications also seem to have been a problem, as there were numerous occasions recorded in the Forcett fire call log when critical information could not be passed on as the IMT was not contactable.

This situation, despite the best of intentions, is not satisfactory. In emergencies the most effective and efficient systems should be used, and there needs to be proper management and accountability, especially receiving and dispatching of emergency '000' calls.

Recommendation 12 – that Tasmania Fire Service establishes suitable systems and practices for recording fire management objectives and tactics.

Recommendation 13 – that Tasmania Fire Service examines options for developing and issuing fire management objectives and tactics from Incident Management Teams in a more timely way, including 'quick' plans.

Recommendation 14 – that Tasmania Fire Services and its partner agencies establish a means of monitoring and reviewing the effectiveness of centralising the location of Incident Management Teams.

Recommendation 15 – that Tasmania Fire Service considers measures to bring local knowledge into Incident Management Team operations.

Recommendation 16 – that Tasmania Fire Service reviews its position on fire ground management to determine whether a unified command model at the fire ground should be adopted.

Recommendation 17 – that Tasmania Fire Service reviews its position on using local experienced officers on the fire ground in the command model in a structured and systemic way.

Recommendation 18 – that fire agencies continue to develop their predictive modelling capability for use in actively managing fires.

Recommendation 19 – that Tasmania Fire Service reviews the communication systems used for all emergency management operations, ensures operators are qualified, and ensures there is appropriate accountability.

Fire Strategy and Tactics

The approach taken to a fire and the methods used can have a significant impact on the outcome. The AFAC Audit did not conduct a detailed tactical review of the fires.³⁶ Many comments were made to the Inquiry about TFS strategy and tactics, and the Inquiry has also identified some issues which require close attention.

It is important to remember that most fires are suppressed in a timely way. There were a number of examples of this with the fires the Inquiry is examining, for instance at Freshwater Lagoon (the Bicheno fire).

However, often the focus is on matters that are not successful in a timely way, or the definition of just what is successful is problematic. This means successful operations tend to be overlooked. Indeed, for police and the emergency services it is a fact of life that successful proactive operations that prevent or mitigate the risk often result in people considering that the risk was not a real one in the first place.

Some submissions to the Inquiry were complimentary of TFS staff and operations; others raised concerns. The latter were mainly directed at career officers and include: they don't have local and country knowledge and experience, are more experienced at structure fires, are generalists and lack experience in particular fires, are risk averse, don't hit fires hard enough initially, let fires burn as they are easier to suppress when they come out, don't know how to blackout or mop up properly, are reluctant to do back burning, and won't work at night.

It is difficult to objectively examine some of these concerns. Sometimes concerns are perceptions that may be influenced by interests the holder may have. Others may be quite real, but are difficult to assess within the scope of this Inquiry; for instance, being risk averse. Despite the difficulties, the Inquiry has sought to examine some key areas with the primary purpose of seeking improvement where it is needed. Processes for constantly maintaining focussed and appropriate fire strategies and tactics should be an essential aspect of all agencies engaged in fire suppression activities, especially TFS.

Recommendation 20 – that Tasmania Fire Service, Forestry Tasmania, and Parks and Wildlife Service have a process for ensuring fire strategy and tactics are appropriate and remain focussed.

Pre-deployment and Preventative Arrangements

Plans to deal with fires should have a proactive element wherever possible as this will increase the chance of successful operations. When there are multiple fires it will sometimes be difficult to decide which fires have the greatest potential for damage or are more amenable to proactive action to mitigate risk. This difficulty should not mean that proactive action is not taken.

In terms of the Forcett fire, TFS was aware of the weather forecast for 4 January and had a prediction model indicating that without changing the fire situation, the fire could run into Dunalley by around 3.00pm. It was also recognised — even expected — that the Arthur Highway would be cut by the fire and that access to the Tasman and Forestier Peninsulas would be difficult.

³⁶ AFAC Audit, at p. 26.

The State Controller was aware of the predictive model on the evening of 3 January. Some action appears to have been taken that evening to alert the community of the location of the fire at Copping. It seems that no other significant proactive action was taken. While there is some debate about when the Forcett fire was handed to the IMT, the Incident Controller for the IMT is clear that he did not receive the Forcett fire until about 8.00am on 4 January, and then began preparing an IAP. He acknowledges the IMT should have taken over the fire earlier. It should also be noted that the IMT finished around 9.00m/10.00pm that night, leaving only a skeleton crew over night with a watching brief. An IAP could have been prepared overnight.

No proactive action was taken to pre-deploy fire resources on the Tasman and Forestier Peninsulas or initiate different measures to warn people of the risk. The IMT Incident Controller told the Inquiry that there were not enough resources to pre-deploy. On the warnings issue, contrast this situation with police action to warn people in the Lake Repulse fire.

It may also be that TFS personnel dealing with the Forcett fire had expected they would change the fire conditions before the forecast weather conditions occurring later in the day, but this is unlikely.

Recommendation 21 – that Tasmania Fire Service ensures that planning for active fires includes a proactive approach wherever possible.

Initial Suppression Action

Questions were raised about a lack of commitment to suppressing fires in their initial stages, particularly if they are in bush settings. Sometimes this is due to a misunderstanding of accessibility, safety and scale issues. However, in most cases it would be expected that this is the best time to suppress a fire and it would be expected that this would be an important tactical approach imbedded in all fire operations. It would be appropriate for TFS to reinforce this as an important principle in its operations.

Recommendation 22 – that Tasmania Fire Service considers adopting a primary tactic of an aggressive first attack on fires.

Six Operational Objectives

The way people process and interpret information and choose ways of responding to it is frequently shaped by personal knowledge, experience and values. Organisational context, especially in the form of culture, is also a factor in determining understanding and the way activities are conducted within and by that organisation.

Doubtless these influences operate within TFS and other organisations with a role in managing fires, and leaders and managers need to be aware of and alert to both the positive and negative elements. Attention should be given to actively shaping the way people see and think about issues in order to obtain the best outcome for the community. Imbedding desirable knowledge, skills, traits and values in an organisation is important.

One method is to provide a framework within which problems are considered, such as with TFS Six Operational Priorities.

Using principles or priorities in this way is a very powerful instrument for influencing organisational behaviour in a positive way, provided it is done in the correct form and without negative consequences. TFS developed and publicised a set of priorities following the Victorian Bushfires Royal Commission, which are set out below. An organisational explanation of the priorities is set out at Appendix E.4.

The AFAC Audit considered this initiative to be one of the successes of TFS operations in the fires.³⁷ It was also the Inquiry's experience that these priorities were readily recalled. Not all fire services in Australia have operational priorities in this form. An example from Victoria is outlined below to help provide an appreciation of the appropriateness of TFS priorities:



Strategic Control Priorities

- *Protection and preservation of life is paramount – this includes:*
- *Safety of emergency services personnel; and*
- *Safety of community members including vulnerable community members and visitors/tourists located within the incident area.*
- *Issuing of community information and community warnings detailing incident information that is timely, relevant and tailored to assist community members make informed decisions about their safety.*
- *Protection of critical infrastructure and community assets that support community resilience.*
- *Protection of residential property as a place of primary residence.*
- *Protection of assets supporting individual livelihoods and economic production that supports individual and community financial sustainability.*
- *Protection of environmental and conservation assets that considers the cultural, biodiversity, and social values of the environment.*³⁸

Both sets of priorities are intended to apply in descending order. However, the TFS six operational priorities are intended to operate when fires burn out of control, whereas the Victoria set is not so limited. Some of the Victorian priorities may differ because they apply more broadly. Equally, it may be argued that the TFS priorities would be better with a broader remit.

Protection of life is the highest priority in the Victorian model and it could be expected this should be the case for TFS as well. Vulnerable people are included in the Victorian model in this first priority and specifically mentioned as the second priority for TFS. On this point it may be considered that the TFS model would be better to refer to 'people at risk' rather than 'vulnerable people', as 'people at risk' may include those who would not otherwise be considered to be 'vulnerable' in the sense that the priority means.

³⁷ AFAC Audit, at p. 42.

³⁸ State Command and Control Arrangements for Bushfire in Victoria 2012, at p.6.

Issuing warnings is a high priority for both models.

Differences between the models occur with other specified assets to protect. The emphasis of TFS model is less on individual homes or buildings; it also specifies fewer assets, like those supporting individual livelihoods or with conservation values.

The TFS model also refers back to fire suppression as the lowest operational priority for fires burning under severe or catastrophic conditions. The description for this priority does not refer to fires out of control and is written in a general way, which may cause some confusion with firefighters.

Setting priorities serves a very useful purpose in providing some structure to fire operations, especially when there is limited time to prepare a plan or there are extreme conditions under which firefighters are operating. It is imperative that they communicate correctly and lead to sound decision making.

Where it is difficult to set objectives and direct operations, such as when there are fast moving and difficult fire conditions, these priorities provide a framework which can be translated into decisions and actions in the field. In this way they operate in a similar way to the military concept of 'mission command', encouraging and empowering subordinates to use initiative and exercise judgement in pursuit of the mission.³⁹ It should be noted that this concept is problematic for military organisations without supportive cultures and capabilities. This should serve as a warning that the use of priorities may not be a panacea and should be used carefully.

Of particular concern to the Inquiry is that the priorities will be seen and used as a one-size-fits-all plan, leading to a lack of attention to developing fire specific plans. Moreover, there is a risk that there will be inappropriate priorities set for assets and groups of people not mentioned and a lack of flexibility to changing conditions. By way of comparison, in Victoria, in addition to the operational priorities, the Fire Service Commissioner will still issue their 'intent' for particular areas.⁴⁰ Flexibility and tailoring the plan to fit the circumstances appear to be highly desirable features to maintain.

These issues can be considered in the context of the Forcett fire when it ran towards and beyond Dunalley. Fire and police personnel engaged in an emergency warning process in front of the fire, advising people to relocate to the Dunalley Hotel as a nearby safer place and/or to go on to Nubeena. This had the effect of facilitating the movement of people in a way which may conflict with the policy of 'not fleeing at the last minute'. All nearby fire crews fell back to and protected the Dunalley Hotel where a large number of people were gathered, as the 'fire front' went through. More detail on this topic is provided in the section on relocations and evacuations.

Recommendation 23 – that Tasmania Fire Service critically reviews the operation of the Six Operational Priorities to determine whether they are appropriate and effective.

39 Transforming Command, The Pursuit of Mission Command in the U.S., British and Israeli Armies, Eitan Shamir, Stanford University Press, 2011, at p. 3.

40 See for example, the Fire Services Grampians Region Readiness & Risk Management Plan, Fire Services Commissioner Victoria, at para. 2.1

Recommendation 24 – that Tasmania Fire Service considers what adjustments may be necessary to the promotion and use of the Six Operational Priorities to ensure plans are suitable for the circumstances of each fire.

Suppression of the Fires at Dunalley

The Inquiry received submissions expressing concerns that not enough was done to protect buildings in Dunalley after the fire front passed. These concerns are illustrated by the following extracts from submissions:

... In fact he lost his own property across the road. The grass caught fire in front of his place, the ... fire brigade was there, we asked them if they could put the grass out but they said no they were there to protect lives and not property ... After they left my husband and his brother went to check on the sawmill and the houses, the school was still there. They were gone for ¾ hour and on the way back it was venting out of the roof, but they couldn't find any brigades.⁴¹

... I question whether it was necessary to withdraw the fire crews from Dunalley, while untrained and under-resourced townsfolk, who remained, tried to limit the impact of the blaze ... In these cases, it was not a raging forest fire that caused the destruction, but merely spot fires lit by embers, or by fire spreading house-to-house ... Many of the houses that survived did so because a resident or neighbour stayed (or returned) and saved them, often by incredibly basic means. Fire crews could have been usefully deployed in these areas without unnecessarily endangering them ...

... I am, however, completely astonished that they did not return to the town after the danger of the fire front had passed. At that stage there were many eminently controllable fires which could have been extinguished...Dunalley was left to burn while the fire crews were off chasing the fire down the Peninsula...I can assure you that buildings continued to burn down through the night, from fires spreading house-to-house or small spot fires eventually taking hold ...

One of the saddest outcomes of the fire was the completely avoidable loss of the school, which occurred hours after the fire-front had passed through town ... My wife counted 19 fire engines drive past this fire, ignoring it ...⁴²

From the family's description of the day's events, there was a sense that some homes and buildings burnt needlessly and that there was a lack of fire fighting crews in the town available to put out the fires.

For example, after the main fire came through Dunalley, household B indicated that they attempted to put out spot fires surrounding a home (that was not their own) that had not burnt during the main fire ... Eventually one of the group left to find a fire service crew to request help in containing the spot fires. When the fire crew arrived, the household members were told to evacuate the area and given directions on how to get to the Dunalley Hotel safety, the fire crew then left. The

41 Submission No. 33.

42 Submission No. 42.

*household members felt that the fire crew should have stayed and attempted to save the house.*⁴³

As the fire moved towards Dunalley on 4 January, a number of crews converged on that location and the Fire Commander arrived at 2.30pm. Fires were spotting into Dunalley at that time. TFS priorities were to:

- evacuate people from Dunalley, to the Nearby Safer Place (NSP) of the hotel or further south to Nubeena
- protect community assets (hotel, bridge and school)
- fall back to the hotel if need be.

At Dunalley there were 15 to 20 fire crews. One crew was from the Dunalley Brigade and as it was composed of local people, the Fire Commander allowed it to take its own action. Crews were patrolling warning people and putting out spot fires. There were two crews at the school and they laid out hoses to protect the school. The weather began to worsen and the fire behaviour was extreme, with a severe ember attack.

At 3.30pm on 4 January, the decision was made to withdraw the crews to the hotel because of the fire conditions. The Dunalley crew was at Boomer Bay protecting houses. Notwithstanding the conditions, the Fire Commander and an accompanying brigade member continued to patrol Dunalley to warn people.

The fire came through the town, crossed the canal and headed south. As this was occurring, at 4.10pm a sector commander and another crew left the hotel to travel towards Murdunna to warn and evacuate people. After this crews began moving back in to Dunalley, though the number of crews and the time at which they went in to Dunalley is uncertain. It included the Northern Strike Team from Cambridge with a number of its crews.

Emergency calls were being dispatched to the Fire Commander from people seeking TFS assistance. There were many calls being received by TFS at this time. Between 2.00pm and 10.00pm, FireComm received 313 '000' calls and most related to the Forcett fire. The calls had the effect of disrupting fire operations as crews attempted to respond. However, there were many instances where crews couldn't respond because of their lack of availability or limited access to the area where assistance was required. In addition to the fire conditions, power poles and lines and other debris were on the roads. Many calls went without a fire response.

Ember attacks continued in Dunalley and properties continued to catch fire. The conditions were such that it was difficult to suppress fires with any certainty. The Inquiry was told that properties would reignite after fires had been extinguished and once a building was alight, it was difficult to put the fire out. Apart from spot fires, generally crews did not attempt to extinguish fires in buildings.

There are mixed views about this approach. The Inquiry was shown in Murdunna an area where crews actively protected houses and were able to save them when nearby houses were destroyed. The Dunalley fire crews also reportedly saved many houses.

A member of the Dunalley crew described the priorities as saving people and houses, including

⁴³ Submission No. 96.

the bridge and the school. They went to Boomer Bay when the fire arrived as they saw that houses were under threat. A number of houses were protected and then they made a decision that once a house was on fire it couldn't be saved — there were too many properties being threatened and fires would reignite. After a short time they returned to Dunalley. In Dunalley, they attempted to suppress a fire in a house to prevent building-to-building ignition.

A fire was extinguished at a local café.

The Station Officer with the Northern Strike Team told the Inquiry that he didn't see any building-to-building ignition, but the team didn't try to extinguish any house fire that was burning really well. The Strike Team put out spot fires to prevent any other property catching fire. He said that if they had more resources they could have saved more property, but couldn't obtain any more resources.

The school was a priority for the Dunalley crew and they checked it 3 to 4 times. It was also a priority for the Station Officer with the Northern Strike Team. He was at the school when the fire arrived and checked on it when he returned to Dunalley. The school reportedly caught fire between 4.00pm and 4.30pm and the Station Officer said that if they had more resources (specifically, breathing apparatus and heavy tankers) they could have saved it (there was breathing apparatus available with some of the crews in Dunalley). The Station Officer told the Inquiry that when he left Dunalley at about 9.00pm, the school was burning from end-to-end.

At about 9.00pm, the Fire Commander and the Station Officer with the crews from the Northern Strike Team left Dunalley and ceased fire operations. The Fire Commander told the Inquiry had been directed to leave by the IMT, that he should get out now or he probably wouldn't get out. He said he was thinking of the next day and began looking for an access point to see if they could get more crews in.

The Station Officer used his initiative and made his own decision, though he discussed it with the Fire Commander. The Station Officer said that at the time he left, there were still houses on fire and the school was burning. The Dunalley brigade crew was the only crew remaining in Dunalley and did not finish until around 7.00am to 8.00am on 5 January.

Control of the fire ground was handed over to a sector commander who had travelled further down the peninsula. He was apparently near Murdunna when the Fire Commander left Dunalley, then moved towards Eaglehawk Neck and was not in a position to take effective control of the fire ground at Dunalley. The only time he came to Dunalley during the night was at 4.30am on 5 January.

A number of calls for assistance were still being received at around this time. As the crews were leaving there was a call that the bridge at Dunalley was on fire, and a crew was sent back to check it out. At 10.15pm a call was received from a person with five children in a house at Dunalley that was back under fire threat because of a wind change. Another was received at 10.31pm from a resident of Dunalley with a house under ember attack.

A radio log also recorded transmissions from a TFS member who was at Dunalley for other duties:

- at 9.12pm, TFS member advised FireComm that he was in the main street of Dunalley and 'there are a lot buildings that could be saved if we had some crews'
- a FireComm operator attempted to put him through to the IMT, but the phone was not answered
- TFS member informed the FireComm operator there was also a house next to the bakery that was just catching fire, but could be saved if they got a crew there
- a FireComm operator attempted to contact the IMT over the radio; again, there was no answer
- TFS member made another call, this time that the bridge was on fire
- a FireComm operator made contact with the IMT. A radio call was put out for any crew in the Dunalley area. No crews answered
- the Fire Commander, who had left Dunalley, advised the IMT that the only crew left at Dunalley was the Dunalley crew. A pager message was sent to this crew to attend the bridge
- the Station Officer from the Northern Strike Team indicated over the radio that he had sent a crew back to the bridge.

There is no further reference to the house near the bakery catching fire or sending any other crews in to Dunalley to protect houses.

Later in this part is comment on the deficiencies in the communications arrangements in the IMT, which may explain why it was difficult for the FireComm operator to contact the IMT, and why messages of properties on fire and how they were handled were not recorded.

The Incident Controller informed the Inquiry that when the fire took off, the IMT was still trying to find out where all the resources were on the fire ground and they didn't have enough resources to get around everything. They weren't able to obtain a good picture of what was happening and where everyone was until the night on 4 January, and as they didn't have an IAP, they were totally reactive at this time. Further, that it was overwhelming between 1.00pm and the evening.

The Operations Officer also said that he was overwhelmed by the workload. He left the decision on whether crews should go back in to Dunalley to the Fire Commander.

The Inquiry has some concerns about how the fires were handled in Dunalley and there are questions remaining.

While it is acknowledged that these were extreme fire conditions and fire crews had worked for extended periods, crews left Dunalley and there was a lack of effective control when there were active fires and properties were on fire and under threat. Apart from leaving the Dunalley crew, which had worked just as long as the other crews, no other action to protect Dunalley appears to have been taken at this time.

Another concern for the Inquiry, despite the limitations of this form of modelling, is the apparent little use by TFS of the predictive modelling that the Forcett fire would reach Dunalley.

Finally, comments on the application of the emphasis on warnings and TFS six priorities are required:

- there is a need for flexibility, which has been mentioned previously, and the ability to return to a fire suppression focus when appropriate. Since the fire front had passed in Dunalley, was the fire still regarded as 'out of control'? Should there have been a more explicit shift to property protection and how should that have been communicated to the crews so that consistent action was taken?
- Dunalley highlights that it can be expected property loss will increase when there is a greater emphasis on warnings and protecting life, and when TFS priorities are applied. This in turn raises the issue of what level of emphasis is required. It is not so much an issue of balance — as it is not possible to weigh up the number of lives versus the number of properties — rather it is about an appropriate level of warning activity and properly assessing the risks. For example, a risk-averse approach would see more warnings, perhaps when they are not justified, and less fire suppression. There does not seem to be any consideration of this issue or attempt to resolve it by TFS.

Recommendation 25 – if it is considered more information is required on action to suppress the fires in Dunalley and why fire operations did not continue, the Department of Justice should conduct an independent examination of this matter.

Recommendation 26 – that Tasmania Fire Service reviews operational practices to ensure there is continuity of fire operations when fire suppression action is required.

Rural Knowledge and Experience

A number of submissions to the Inquiry raised concerns about the extent TFS has or incorporates rural knowledge and experience into its operations. Some of these relate to particular tactics, such as back burning, which will be discussed in other sections (the comments and references in the section above on IMTs are also relevant to this issue).

One submission suggested that landowners should be:

- contacted by emergency services at the start of each fire season so that these services can become familiar with the property features (for example, access and water points)
- warned about fire threats early so they can prepare their properties
- contacted by emergency services so they can provide local intelligence and information of assistance to firefighters.⁴⁴

Another submission made the point that many farmers are working multi-generational properties; they care about them and the environment; and the skills and experience of rural property owners should be used to manage their properties in the public interest. Recommendations were made that:

- councils provide the contact details of brigade officers to property owners so the brigades can obtain local knowledge

⁴⁴ Submission No. 86.

- local brigade chiefs have full control of decisions during firefighting.⁴⁵

Further submissions highlighted the following issues:

- local landowners should be consulted in the early stages of fires to secure resources and obtain cooperation⁴⁶
- strong volunteer bush brigades should be maintained so not only are their resources available, but their local knowledge and experience is also maintained⁴⁷
- TFS's takeover of the management of brigades has meant local independence and decision making has been lost — fire fighters felt compelled to seek instructions from the control centre at Cambridge for the simplest of decisions.⁴⁸

No doubt a strong local volunteer brigade capability is essential and there will be further comments on this in the later section on resources. At the present the issue is on strategy and tactics.

There will be tensions between local autonomy and the need for Government agencies to act in a professional and accountable manner, and to scale up operations where fires are beyond the capability of local resources. At the point of these tensions there will be different opinions. Tasmania has the advantage of a consolidated fire service, bringing together rural, urban, volunteer and career personnel. Arrangements with PWS and Forestry Tasmania are mature and stable. This should facilitate concentrated and united operations to protect the community. The Inquiry is not satisfied that there is sufficient justification, on the material it examined, to consider separating TFS into urban and rural components.

The advantages of a consolidated organisation and partnerships with other organisations will only remain with constant vigilance by those entrusted to lead the respective organisations. In this regard, one challenge for TFS is to maintain an organisation which values and encourages local volunteer participation, and incorporates the knowledge and experience rural communities have about fire management. In the pursuit of this outcome, TFS should ensure it has a well-developed strategy.

Recommendation 27 – that Tasmania Fire Service reviews its integration of rural local knowledge and volunteer brigades into fire operations, develops and maintains appropriate strategies, and aims to be a best-practice fire service in this regard.

Back Burning

Whether back burning operations should have been conducted or not is a contentious issue in the initial stages of the Forcett fire.

A landowner approached the Incident Controller at the Forcett fire on the evening of 3 January to ask if this tactic was to be used. No back burning operations were conducted on 3 and 4 January by TFS.

45 Submission No. 52.

46 Submission No. 75.

47 Submission No. 75.

48 Submission No. 53.

Submissions received by the Inquiry raised this issue:

Nothing could have been done to mitigate the fire, once the extreme weather conditions occurred. However given that the conditions were forecast and there were known to be fires burning at least 24 hours prior, a major back burning effort undertaken on the Thursday evening/night may have reduced the Friday fires and given a chance to control them.⁴⁹

Tas Fire personnel at Hazelwood on the Thursday afternoon/evening appeared to only be listening to the decision makers in Hobart who even 5 weeks after the fire were unaware that it had been wet and drizzly at Copping that night ... my brother ... and myself were desperately seeking approval to back burn on the Thursday evening or Friday morning but the "Head Office said NO" so everybody, except one crew went home! ... A back burn from the highway and ... paddocks up to the fire front (a distance of 200–300m) would have been risky, but the alternative of doing nothing was much more catastrophic.⁵⁰

Feedback ... suggests that there was a widespread reluctance among fire chiefs to use back burning as a tactic during fires, reflecting their excessive caution on the part of fire managers who have perhaps come from an urban background and have no hands-on familiarity with fire behaviour in the bush.⁵¹

Local volunteer brigade crews attended the Forcett fire when it was first reported on 3 January, including some very experienced volunteers from the Dodges Ferry Brigade. The Incident Controller was a senior station officer from TFS. He acknowledged being approached by a local landowner on the issue of back burning and after discussing it with the volunteers, decided not to back burn. He told the Inquiry that he didn't believe it would be a successful tactic due to the weather, it was resource intensive, there were a lot of structures in the vicinity, and he only had enough night crews to do patrols. In his opinion, the only possible area to back burn was in the Red Hills area; however, spot fires had already started, and therefore back burning was no longer an option.

Of the two senior brigade members present, one agreed with the decision as there was not enough personnel for the terrain the fire was in. His view was that back burning was out of the question. The other was in favour of back burning but was instructed that under no circumstances were they to light another fire.

The IMT Incident Controller for the Forcett fire told the Inquiry that, although he did not have responsibility for the fire on 3 January, it was unlikely any back burning could have been done on 3 or 4 January.

It did appear to the Inquiry that there were generally different opinions on whether to back burn or not, but the Inquiry did not observe any reluctance by Incident Controllers, including TFS personnel, to use back burning as a tactic in managing fires provided that conditions were conducive to its use.

49 Submission No. 53.

50 Submission No. 70.

51 Submission No. 75.

The Inquiry received information that a person not attached to a brigade attempted some back burning near the location of the Forcett fires on the morning of 4 January, a fire ban day.

Blacking Out and Mopping Up

In both the Bicheno and Forcett fires, spot fires came out of areas of previous fire activity, at Lilla Villa and Wettenhall Flat respectively. These fires had started a considerable time before the spotting occurred and were attended by TFS crews. There was the opportunity for them to be extinguished, not just contained. Contrast that with two fires in the Coles Bay area attended by PWS crews, at Freshwater Lagoon and Butlers Point. The former was successfully blacked out before the adverse weather occurring on 4 January, and the latter was later overrun by the fire which originated from Lilla Villa.

It was suggested to the Inquiry that brigade training for blacking out was not adequate, and the circumstances of these fires raise the issue of whether TFS practices and techniques provide sufficient emphasis on and skills to successfully black out and mop up, rather than be contained and patrolled.

Recommendation 28 – that Tasmania Fire Service reviews its approach to blacking out and mopping up, including its policies, operating procedures and training.

Working at Night

When interviewed by the Inquiry about action taken at the scene of fires, some TFS personnel said they didn't undertake suppression activity at night. This approach was explained as being for safety reasons, because of the heightened risks at night in bush settings (for example, with falling trees). Minimal crews were allocated to night shifts, usually with a patrolling brief.

Working at night:

- is often the best time to successfully manage fires, as weather conditions tend to moderate
- maintains the continuity of fire fighting operations
- prevents any gains made during the day from being lost.

It should be noted that it was the practice of some TFS crews to not start again on the fire ground until around 9.00am to 9.30am after a number of hours of preparation, when perhaps they should start earlier.

The Inquiry is aware of situations where suppression activities did occur at night, including in bush settings (what exactly is a bush setting, for the purpose of this practice, is one of the undefined elements, which makes the practice unclear). It should also be noted that brigades are often initially called to attend fires at night, particularly for lightning strikes.

Norske Skog fire personnel told the Inquiry that they actively fight fires at night, putting in fire breaks and control lines, and expressed concern at receiving reduced crews and resources for night shifts.

TFS does not have a policy on this issue and the only reference the Inquiry can find to a policy position is in the risk register, where there is an indication that for bushland fires with an extreme risk rating, night time fire suppression activities are to be banned.

The Inquiry could not get a clear position from TFS on this issue. It is quite unsatisfactory to have such a vague and ill-defined approach with considerable currency in TFS, and a high potential for ad hoc decision making to have an idiosyncratic impact on fire management operations.

Recommendation 29 – that Tasmania Fire Service reviews its approach to fire management operations at night, and develop and effectively implement unambiguous policy and operating procedures.

Air Support for Fire Operations

Tasmanian bushfire agencies coordinate the use of aircraft for fire operations through two main processes:

- the National Aerial Firefighting Centre (NAFC)-contracted aircraft. Tasmania normally uses five NAFC-contracted aircraft: two positioned in the north of the State and three in the south. These aircraft can be re-positioned depending on risk. On 4 January, all NAFC-contracted aircraft were deployed to the fires. NAFC provides a pool of aircraft from around Australia from which agencies can resource additional aircraft when seasons are busy. NAFC assisted with the re-positioning of four additional aircraft for the 2012–13 fire season
- the Aircraft 'call when needed' register. This register provides a pool of local aircraft, with known aircraft type, capability and cost. In the lead up to 4 January, there were 12 aircraft available of varying size and capability.

An additional fixed wing and a medium helicopter water-bombing aircraft were brought in on 3 January ahead of the predicted bad fire weather.

From 3 to 5 January, the coordination of aircraft was done through the State Air Desk duty officer located in the SFOC. Aircraft were allocated to incidents through a priority process.

Use of aircraft is carefully managed and assessed. In the right conditions, aircraft can be effective at slowing or halting the forward movement of the head fire, especially when aircraft arrive at the fire at a relative early stage of the fire start. However, they are expensive to operate.

Other factors to consider are:

- effective deployment of aircraft requires their use in coordination with ground crews. Ground crews are better able to mop up the fire once aircraft have reduced the forward movement and its flame height
- quick turnaround times are required. If the turnaround time of a helicopter is five or more minutes, it would be considered relatively ineffective as the fire is likely to re-establish itself and gain forward momentum before the aircraft can return to 'knock the fire down'
- tree canopy density can also affect the use of aircraft. Where the tree canopy density is too thick it is unlikely the water drop will penetrate the canopy and suppress the fire

- there needs to be ready access to a water supply. Most helicopters can access water from water holes, slow running rivers or creeks and, if properly prepared, the open sea
- refuelling facilities must also be available close by. Refuelling facilities can be established on a sports oval or similar open space with good approach and departure access. Mobile fuel tankers and trailers and drums can be used from sports fields or similar open spaces. Fixed wing aircraft will generally use an airfield as close as possible to the incident
- safety is paramount. Factors such as smoke and visibility, heat, fatigue and regular rest breaks for pilots in arduous conditions are critical to safety. Many fires are also managed in mountainous and undulating topography, which creates dangers for aircraft.

On the morning of 4 January, there were a number of aircraft deployed to the Lake Repulse and Forcett fires. Flying conditions were good early, though cockpit temperatures would have steadily increased, contributing to pilot fatigue.

As the weather conditions worsened in the afternoon, so too did the flying conditions. This was predominantly due to smoke, heat, debris and the strengthening wind. It would have been difficult to hover to pick up water and accurately drop water from above.

There were many examples where aircraft were used effectively to help ground crews and protect property, crews and/or people relocating from fire risk areas. There are examples of aircraft extinguishing spot fires ahead of a main fire, giving people more time to evacuate ahead of the fire.



Photo courtesy of Andrew Skelly

Aircraft carried out reconnaissance, informing ground crews of spot fires, and provided a platform for firefighters to observe fire conditions and obtain intelligence for fire operations.

This bushfire season, Tasmania trialled the use of fixed wing water bombing aircraft. There were examples where these aircraft were able to respond quickly and to help with the containment of fire until ground crews could arrive. Long turnaround times due to ground infrastructure around the State may inhibit the fixed wing aircraft from being a long-term viable and cost-effective option. An evaluation of the use of fixed wing aircraft would be beneficial.⁵²

The Inquiry was not able to conduct a detailed examination of the use of aircraft at each fire.

It must be remembered that aircraft are not the panacea to fighting bushfires. They must be used collaboratively with ground crews to ensure an efficient and effective outcome. Aircraft are expensive so consideration must be given to the effective benefit verses cost.

Detailed procedures on deploying aircraft on days of fire risk were not available. It would be beneficial for fire agencies to rapidly activate aircraft to reports of fires at an early stage to increase their effectiveness. Pre-deployments should also be considered.

By way of example, on 3 January, a total fire ban day, the Lake Repulse fire started at 11.35am. Ground crews took 26 minutes to arrive and initiate fire fighting operations. Aircraft were not activated until 12.06pm and it then took 43 minutes to arrive at the fire. It is unlikely on this day that a single aircraft could have effectively helped to contain the head fire after this delay. Pre-positioning an aircraft into this high risk area may have been an option, and given the ready availability of water it may have been possible to hold the head fire until crews arrived.

There was a lack of detailed, formulated and implemented air operations policies and procedures. Many air operations documents are in draft form and several years old. The current and reviewed procedures appear to be well embedded and used regularly. Considering the high risk nature of air operations for firefighting, the Inquiry feels there needs to be a substantial amount of work done in order to establish, integrate and maintain air operations procedures across the fire agencies.

Recommendation 30 – that bushfire agencies evaluate the use and effectiveness of fixed wing water bombing aircraft.

Recommendation 31 – that bushfire agencies develop procedures for the automatic activation of aircraft to fires at pre-determined trigger points on high fire risk days.

Recommendation 32 – that bushfire agencies develop, implement and maintain air operations procedures.

52 The AFAC Audit supported such a review.

Research, Development and Review Capability

It is apparent that the resources, capabilities and practices within TFS to effectively develop, document, implement change and review policies, operating procedures and operations are not sufficient for the task required of a modern, contemporary and accountable public sector organisation. This comment should not be taken to suggest a lack of willingness on the part of TFS to be progressive. To the contrary, the Inquiry has been impressed by the desire to learn and improve across the fire services in Australia generally, and TFS is no exception.

Recommendation 33 – that Tasmania Fire Service establishes sufficient resources and expertise to research, develop, implement and review its policies and operations.

Recommendation 34 – that Tasmania Fire Service documents and publishes its operational policies and procedures so they are accessible to and suitable for operational personnel.

Initial Police Operations

The initial police response differed for the various fires and was influenced by the apparent fire risk, transfer of information, scope of police operations and the initiative of those involved. It should be noted that this section is not intended to provide a detailed outline of police actions with fires, rather to examine how prepared police were and the extent to which they were proactive in their initial operations.

The Lake Repulse Fire

At 12.25pm on 3 January, the Acting Divisional Inspector at Bridgewater was advised on the Lake Repulse fire. He sought information on TFS needs, considered possible scenarios with his staff, identified a risk to Ellendale and briefed the Southern District Commander.

The Acting Divisional Inspector's priorities in his response to the situation were assisting TFS in the form of road blocks, and reassuring and informing the community. He brought in additional police and had eight patrols in the fire area up to 9.00pm. A visible police presence and speaking to people at the Ellendale shop and 'door knocking' homes in the area were done to reassure and inform the community. The fire was contained but not under control and a night shift crew was left in the area overnight.

At 7.45 am on 4 January, the Acting Divisional Inspector attended a management meeting with his District Commander, and was then present when a TFS briefing on the fires and the weather forecast was provided. He told the Inquiry that the 'catastrophic' description for impending day caused him to reconsider whether he had taken enough action. Arrangements had already been made for police to attend the Hamilton Police Station to be briefed and assigned tasks. These arrangements were augmented to provide him with a total of 14 single police units and six SES volunteers. He ensured all of his staff were properly briefed and 'on the same page'.

As the Acting Divisional Inspector was not confident in the timeliness and currency of the information TFS would provide, and was not being able to listen in on TFS radio system, he resolved to go into the area of the fire. Around midday, he moved to Hamilton; later he went into Ellendale and based himself at the Ellendale Fire Station, identifying this as the place where he would be the most accessible and able to obtain reliable information.

Police units travelled throughout the area in the potential path of the fire warning people of the fire and to be prepared for 'what was coming'. When the Acting Divisional Inspector was advised the fire was out of control, he directed a second round of contact with the community delivering an evacuation message. There were problems with this approach and message, but that will be dealt with in a separate section below, as will the issue of road blocks.

On 5 January, the Acting Divisional Inspector had fewer resources deployed; however, they were sufficient for the road blocks and reassuring the community.

It should be noted that the Acting Divisional Inspector had some previous experience with a large fire earlier in the 2012–13 fire season. However, this does not explain all of his approach, and the level of detail above has been provided as context for the approach taken with the other fires.

The Bicheno Fire

Local police at Bicheno were first informed on the fire (which would become the Bicheno fire) late on the night of 3 January. The Senior Constable attended the fire scene and left when it was contained early next morning. The Bicheno police checked on the fire at around midday on 4 January. There was no need for any police action on either occasion.

At about 4.10pm, they received a message from TFS to evacuate Courland Bay as the fire had broken its containment lines and was expected to impact on Courland Bay that afternoon. They went in to Courland Bay and with other TFS personnel, advised the few people there to leave. They did so and all left shortly before the fire front arrived and destroyed the houses.



Photo courtesy of Andrew Skelly

Later that day, they were asked to 'door knock' people in Harveys Farm Road to advise them to be ready to evacuate if the fire approached.

The Bicheno officers were unaware of what was happening at the southern end of the fire and there was no other police action apparently required. Bicheno is in the Southern Police District, however the Northern District Commander took an interest in this fire due to the events occurring with the Forcett fire and offered to take it over the next morning. He had a Northern District inspector contact Bicheno to ask whether they required assistance. Considering his current appreciation of the fire assistance was not needed.

At 5.00am on 5 January, a Bicheno officer was contacted because there was concern about the fire in Harveys Farm Road, and the situation was recognised as requiring more police attention. The Northern District Inspector arrived at about 10.30am to take over police operations. He operated from various locations, including the Bicheno Fire Station, and later had personnel to assist him. Police duties mainly related to road blocks and community warnings.

Mention has been made of the approach taken by the Northern District Commander in assigning inspectors to fires and positioning himself at the Northern RFOC. This approach was taken so he could obtain timely and reliable information of the fires. This approach seemed to be effective in the present circumstances, but it would be problematic to be so disconnected from the Police Operations Centre if the situation became more urgent, complex and larger in scale.

The Forcett Fire

The Dunalley Officer became aware of the Forcett fire shortly after it started on 3 January. He contacted TFS personnel to find out what they expected the next day; he was advised by the Incident Controller to get his family out and by a local brigade member that the fire could do anything, 'maybe go to Dunalley'.

The Dunalley Officer contacted a Sergeant at Sorell and following contact with his Divisional Inspector, the Dunalley Officer was told to take a 'wait and see approach'. The Dunalley Officer also spoke to the Constable at Nubeena and they decided to make plans for what to do in an emergency; for example, open the Nubeena Civic Centre as a refuge, use Dunalley station as a command centre, contact local services, and consider road blocks. Action was taken that day to 'door knock' the Copping/Kellevie area to provide advice to people about the fire.

The Nubeena Officer was rostered for a day off on 4 January but, given the potential of the fire, cancelled that and was on duty. He understood the fire could push south towards Copping, Dunalley and Connellys Marsh, and he confirmed with the Dunalley Officer that he had been told by his superiors that 'TFS would advise' on any action to take.

A hot day response and other preparations had been made by the Divisional Inspector by the time he was advised on the Forcett fire on 3 January. It was not considered a problem at that stage, but he was told that if it got worse the next day it could get away. He said he discussed the fire with the Dunalley Officer; however, it was probably the Sorell Sergeant (the Divisional Inspector was new to this Division and not familiar with the Sorell and peninsula areas, though his support Sergeant was).

On 4 January, the Divisional Inspector was on duty at his office and he had set up a PFCP at Bellerive. He did not attend a District Management Group meeting or a briefing on the fire situation as he believed the meeting was only about setting up the POC, and it was still a 'wait and see' approach. He felt there was still no evidence that 'it would be bad', but he advised the Dunalley and Nubeena Officers to get their families out, and was aware the Sorell Council was setting up an evacuation centre and that the Dunalley officer had set up the Dunalley Hotel as an evacuation point.

Police running sheet entries indicate the information from TFS which was passed on to the Inspector on 3 January and early on 4 January did not indicate serious concern for the Forcett fire.

The District Commander arranged his District Management Group meeting for 7.45am on 4 January and a SREMC meeting for 8.30am. It appears to have been difficult to get all members of the SREMC to attend at short notice and there were only a few members there for the 8.30am meeting. He established a POC with himself as the Commander. A SEMAG meeting was held at 10.00am, which he attended as an observer. He arranged and attended another SREMC meeting at midday and at 1.00pm attended a SRSC meeting to brief the committee. The District Commander had attended TFS briefings and was aware of the predictive modelling. He told the Inquiry that he believed the South East Inspector was at the management meeting.

Communications from the Divisional Inspector to the District Commander were about the possibility of the need for road blocks and the Divisional Inspector was informed a decision would be made at 1.00pm. He passed up concerns from the Dunalley officer about tourist numbers and on the need to close the Arthur Highway (this will be dealt with in the section on road blocks). It appears the Divisional Inspector did not receive any instructions from the District Commander. If this was the case, it is possibly because the District Commander believed he had been present at the earlier meetings and/or the District Commander was overloaded.

The Divisional Inspector told the Inquiry that as the morning went on, the Dunalley Officer was pushing for road blocks, but that in a fire TASPOL takes the lead from TFS. He also encouraged the Dunalley Officer to make the call to evacuate and establish road blocks. The lack of timely advice from TFS was an issue for the Inspector.

Some resources were pre-deployed, but more could have been done.⁵³ Mid-morning on 4 January, the Divisional Inspector sent a sergeant and two police to an area below where road blocks might be. Initially they were directed to conduct high visibility hot day response patrols (a heightened level of readiness for police on high fire danger days). Later they were sent to Nubeena and were told to meet another five police. They stopped at Sorell and Dunalley to receive briefings and arrived at Nubeena at 1.30pm, where they established a PFCP in the SES building to coordinate police operations. The Divisional Inspector also told the Inquiry he sent a sergeant and other police to Dunalley as there wasn't a sergeant at Dunalley. However, the Sergeant told the Inquiry he was sent to Sorell at about 1.45pm and self-activated to Dunalley with two constables, where he took charge.

The Divisional Inspector told the Inquiry that when the Forcett fire flared up and ran towards

⁵³ Tasmania Police Debrief Report, at p. 20. Consideration is being given to including re-deployment into the Hot Day Response.

Dunalley, they were overwhelmed at his PFCP. A lot of information was not recorded and they did not have enough resources there.

The Divisional Inspector also told the Inquiry that the fire flared up at Primrose Sands in the afternoon, and that a constable who had gone there to move his caravan 'ended up running the efforts' there. This was probably an off-duty inspector who took charge of the situation at Primrose Sands, arranging for police to warn the community and prepare them for evacuation in an organised manner.

Another inspector offered his services and took over from the Divisional Inspector at Bellerive at 7.00pm. He came into the PFCP at 5.30pm to familiarise himself. The Inquiry was told that very little was in place at the PFCP: only three people, including the Inspector. This relieving Inspector took action to establish the PFCP during the evening. He closed the PFCP at Sorell as it was duplicating action at Bellerive in organising personnel, and was not a PFCP.

There does seem to have been a communication breakdown in relaying information on the predictive modelling to the Inspector at Bellerive, which may be understandable when one considers all the meetings the District Commander was attending and what he was trying to achieve. This does highlight the need to ensure committee meetings do not encroach on response operations. It is also apparent that there was little proactive action taken, apart from police in the field, in dealing with the Forcett fire. Again, communication gaps and overloading responsible managers could have contributed to this.

Recommendation 35 – that Tasmania Police ensures planning emergency operations includes a proactive approach wherever possible.

Warnings and Alerts

Warnings and alerts were a significant aspect of response operations. However, they will be dealt with in detail in PART G and in the section on Relocations and Evacuations, where they are connected to those operations.

Road Closures and Traffic Management

Road closures and traffic management was a significant part of emergency management in the three fires the Inquiry is examining, mainly:

- the decision to close the Arthur Highway during the Forcett fire on 4 January
- the disruption to the community that the road closures caused.

In emergencies, especially fires, road closures are frequently necessary and it is difficult to implement these effectively for anything but a brief period of time without attracting censure from the community. That being acknowledged, given the impact on the community there should have been more flexibility in managing road closures, especially for the Forcett fire. This issue featured prominently in the Victorian Bushfires Royal Commission and was clearly a matter TASPOL and the emergency services should have been prepared for.

Reference has already been made in the section on Emergency Powers to the legal authority to close roads. It is not intended to make any further comment on the authority to close particular roads, as this is dependent on the prevailing circumstances and those who are interested can obtain legal advice or litigate for their own purposes.

Closing the Arthur Highway was generally intended to control the volume of traffic coming down into the Tasman and Forest Peninsulas and, considering the limited access to and from this area, to reduce the number of people who may have been at risk or affected by the Forcett fire or would impede or complicate emergency operations. As events occurred these concerns were quite appropriate. However this action had the potential of negatively affecting the activity of businesses dependent on tourism and other recreational and community activities. A submission received on the economic impact on Port Arthur confirms this concern.⁵⁴

These considerations explain why the decision on this matter was referred as high as SEMAG. Normally a decision on road closures would be made in the field, and possibly there was some risk averseness pushing the decision up to this level.

Requests to consider closing the Arthur Highway were made quite early and it was considered at a SEMAG meeting at 10.00am on 4 January, where the minutes record:

SEMAG noted that policy and strategy was currently being managed by TFS.

SEMAG discussed the issues associated with the closure of the Arthur Highway and consequences for communities, travellers and services in areas south of Dunalley.

SEMAG noted the need for early advice to be provided for people intending to travel through the area.

Police understood that a decision would be made on this issue at 1.00pm. Interestingly, the South East Division Inspector was encouraging his subordinate to make a decision in the field. Events simply overtook the decision and the Highway was closed by police at 11.52am due to the fire activity. This was too late to reduce the volume of traffic in any meaningful way.

There was generally the view among police that TFS, as the Managing Authority, would make decisions on road closures. On this occasion the decision to re-open the Highway was taken by the Southern Regional Controller (TASPOL Southern District Commander) who had been appointed to be 'in charge' of the incident.⁵⁵

It is quite understandable that there will be conditions in managing a fire where TFS will need roads to be closed; for example, where they are seeking to contain a fire along a road and have personnel and equipment on that road or where there is danger from smoke across a road. This interest is reflected in the section in the *Fire Service Act 1979* that provides brigade members with authority to close roads.⁵⁶ However, the Inquiry is concerned if police adopt the position that it is always a TFS decision to close or open roads in connection with a fire. As indicated above, events did lead to police closing the Highway.

54 Submission No. 71.

55 See the previous discussion on this in the section on Multi-agency Control and Coordination.

56 Fire Service Act 1979, at s. 47.

Part of the reason for police deferring to TFS may be derived from section 47 of the *Fire Service Act 1979*, in that police may close roads under this provision but 'shall' close a road at the 'request of an appropriate fire officer'.⁵⁷

Another part of the reason may be that police do not see themselves as having a broad emergency management role in a fire situation, quite independent of TFS. This will be discussed in further detail in PART J of the Report, but it is sufficient to point out here that there will be occasions where police should act in the best interests of protecting the community on their own initiative. The TASPOL Emergency Traffic Management Points (TMP) Access Levels policy has an ambiguous position on this issue. It recognises police have an independent discretion, but then provides that where there is an IMT the relaxation of traffic restrictions requires authorisation from the Management Authority.

It would be unfortunate if practices have led police to a narrow interpretation of their role, and removing the mandatory requirement (in section 47 of the *Fire Service Act 1979*) should be considered for police if it is an impediment to a clear understanding of the police role. Police should, of course, act on a request from fire officers. The Inquiry did not examine any other mandatory elements in this provision.

Road closures, especially the Arthur Highway, had a significant impact on the community during response and recovery operations. They mainly affected people in the Forcett fire, but also occurred to a lesser extent for the other fires. An examination of the issue in the Forcett fire is sufficient for the purposes of understanding the matter and considering improvements.

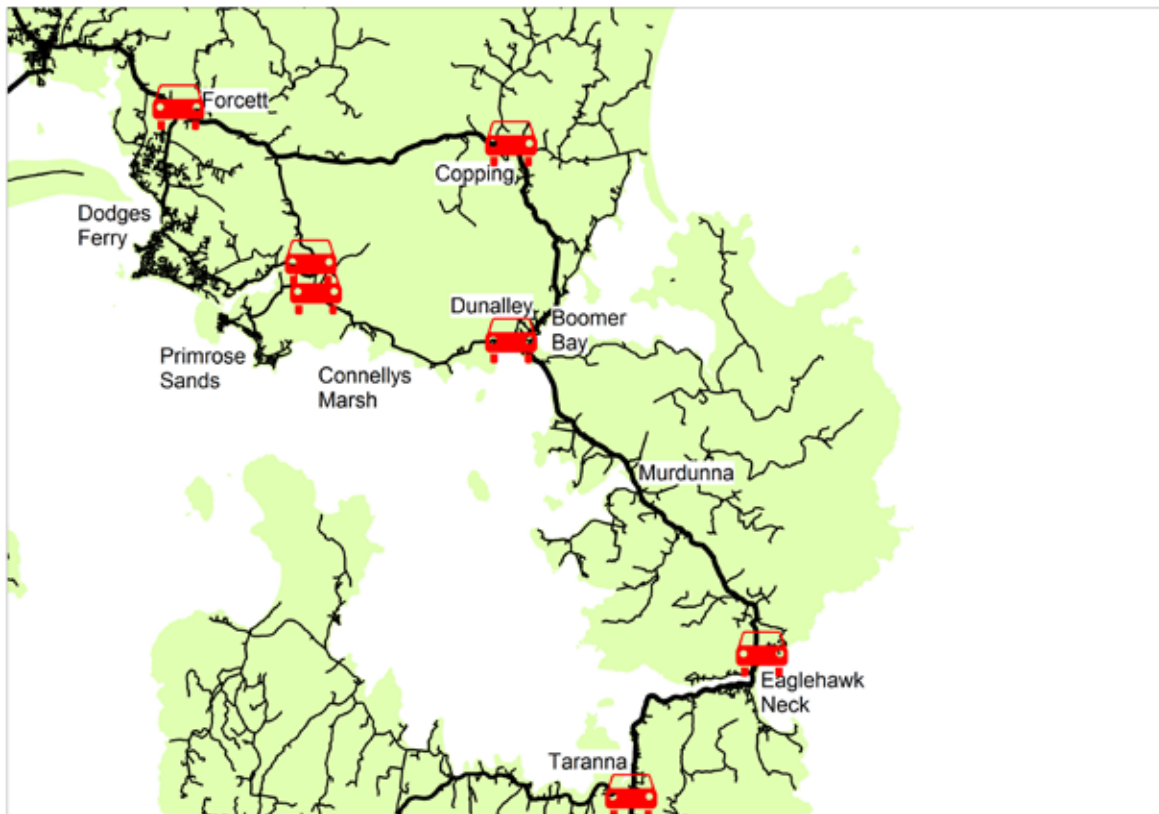
By the evening of 4 January, roadblocks were in place on the Arthur Highway from the Old Forcett Road turn off in the north to Taranna in the south, a distance of 53km. Other road blocks were at the intersections of Sugarloaf Road and Carlton Road at Primrose Sands, Sugarloaf Road and Fulham Road at Primrose Sands, Arthur Highway and Marion Bay Road at Copping, and Fulham Road and Gellibrand Street at Dunalley.



Image courtesy of Marty Piesse

⁵⁷ Fire Service Act 1979, at s. 47 (3)(a).

Figure E.5 Location of Police road blocks by the evening of 4 January 2013.



In effect the road blocks prevented access to towns including Forcett, Copping, Primrose Sands, Dunalley, Murdunna, Eaglehawk Neck, Tarana, Port Arthur and Nubeena. People north of the Old Forcett Road turnoff could not access anywhere south of that road block. Those who remained within areas encompassed by the road closures could in some cases access areas through 'back roads'. These were not secure areas from which people were fully excluded and people within the areas could move around freely.

Road closure points were moved on a number of occasions; at 11.00am on 10 January the point at Taranna was moved 9km north to Eaglehawk neck, and at 5.30pm on 10 January the point at the intersection of Old Forcett Road and the Arthur Highway was moved 5km south to the intersection of Sugarloaf Road and Arthur Highway.

At 11.30am on 11 January, all roads were re-opened to residents, property owners and business operators. At 6.00pm on 13 January, all roads were re-opened to the public with speed restrictions in place.

This issue drew most negative comments in the submissions received. It is not intended in this Report to itemise the submissions. The following points have been derived from submissions and the Inquiry's examination of the issue. Road closures:

- affected private fire operations by not allowing people and equipment through to be used for this purpose
- prevented land and home owners from entering to care for livestock and pets
- prevented people from entering to care for friends or relatives
- prevented people coming out of areas — to obtain information, locate a friend or

relative, obtain medical treatment or needed supplies — as they knew they could not come back in again

- isolated people within the affected areas
- compounded the trauma people experienced with the fires
- limited the capacity to check on the welfare of people within affected areas
- limited the ability of people to take action to promote recovery, at a personal and community level
- caused anger, frustration and aggression
- negatively affected businesses.

Personal impacts are illustrated by the following excerpts from submissions:

‘The Police road blocks were a problem. We understand that the Police had a job to do to keep people off dangerous roads when the fire was on and when burnt trees were a hazard ... but the ‘no flexibility’ rules enforced by the officers manning the road blocks caused us real problems when we wanted to get up the road to get a mobile phone signal or have our daughter deliver a generator and fuel or have an electrician come to our house to connect up the generator.’

‘I am highly critical of the manner in which local residents who suffered a major disaster were treated by Police and those Police had obviously been directed by the hierarchy to follow a certain procedure and were ordered not to deviate from that procedure.’

‘Residents who had fought the fire and did not leave their residence during the fire were refused entry when they left their homes to obtain necessary provisions and medications several days after the fires.’

‘While I do not have a problem with preventing people from entering the area, it was not necessary to stop people who were already in the restricted zone from going out to get supplies. This caused a lot of completely unnecessary hardship for those who remained to save their houses. We were consistently told we were free to exit the cordon, but could not be guaranteed re-entry on our return.’

‘The measures in place by the police that enabled people to readily leave, but not return, caused a great deal of aggravation and bad feeling, without achieving anything positive. People with a compelling reason entered the exclusion area, sometimes forcing their way through roadblocks when they knew the police manning them had no way of stopping them.’

A system that recognised some people were well equipped to help and had legitimate reasons for being in the fire area should have been planned and implemented immediately after the fire. It could have facilitated their movement in and out, and alleviated a great deal of the ill-feeling that occurred, and still persists, towards the authorities.’

‘The roadblocks were also poorly handled. There were numerous instances where critical equipment and supplies, such as medication or firefighting equipment and personnel were stopped and turned back at roadblocks, hindering the effects of people to respond and recover.’

'Farmers were denied access to help their injured and suffering livestock, as were animal aid organisations such as the RSPCA. People attempting to help themselves and restore their properties to basic order were refused the ability to access tools and materials. Damage done to their livelihoods was compounded by the refusal of police to let essential resources through blockades.'

'Police need to recognise that landowners have a responsibility/duty of care to their stock, and need to be allowed to access their property both during events to move stock, and after events to humanely put down animals which may have been affected if needed.'

'The manner in which the police managed road blocks needs to be looked at. A blanket order to prevent any movement by people directly involved in the fire situation [is] short sighted and only adds to the stress of the situation. There needs to be a degree of flexibility to allow those trying to manage stock, even conduct their business in the days following.'

'... we/staff/suppliers had to go through the torturous process of getting permission to use the road, and twice this was not granted. My wife was allowed to leave the Ellendale Rd, but was not allowed back in with some essential supplies. All affected locals had similar experiences, with some being treated very rudely by "out of town" police ...'⁵⁸

Similar impacts and issues arose in the Victorian Bushfires Royal Commission and these should have been well known before the January fires.

In some ways the road closures operated in a contrary way to accepted policy in managing emergencies. For instance, they effectively operated as forced evacuations by preventing people from returning to their homes or to 'stay and defend' their properties. And the closures did little to support community resilience.

For some who remained within the areas affected by road closures and were not willing to leave for fear of not being able to return, their isolation was compounded by the loss of electrical power, which meant in many cases they could not communicate or obtain information.

TASPOL developed a policy described as Emergency Traffic Management Points (TMP) Access Levels in March 2010 and a copy is at Appendix E.5. As a broad policy position it may seem appropriate and sufficiently flexible for its purpose. Whether the policy was appropriate or not, there were problems with its implementation.

Flexibility was introduced in some areas. The Inquiry was told that in the Lake Repulse fire, the people were let in and out of the restricted areas in a controlled manner. There were power lines and trees down over Ellendale Road and Aurora Energy (Aurora) started its work on 5 January. Local people were allowed through on 7 January and the Inquiry was shown a list that was used for this purpose. The Acting Inspector also told the Inquiry that it was necessary to get a milk tanker through on this day and there appeared to be a 'decision making blockage' at the POC so he approved it at his level, as he did in escorting some

58 Submission Nos. 28, 38, 42, 53, 74, 85b and 86.

fruit pickers through. Anecdotally some similar flexibility also occurred on occasions in the Forcett fire.

At the Bicheno fire there were some issues with local TFS and police agreeing to open Coles Bay Road for short periods, as on one occasion there were fire operations underway along this road. Police were instructed that they had to receive approval from the IMT.

When interviewed by the Inquiry, the Incident Controller explained that on 5 January when this problem occurred he made an arrangement with police that all requests would come to the IMT. He said the arrangement was that the IMT wouldn't question their recommendation, but they needed to know for the safety of the public and fire crews. He said the decision making was handed back to the field by 7 January, and that it was his preference it should be managed 'on the ground'.

These instances illustrate some issues in implementation. The Forcett fire is not as straight forward, given the scale and complexity of the area affected by the fire. It should also be kept in mind that in the Forcett fire there were ongoing fire operations in areas that affected the community; there was extensive structural damage; and police, in the early stages, expected to find loss of life.

It should also be noted that police at road closure points took the brunt of people's frustrations and anger. They were often by themselves and had to deal with aggressive motorists who wanted to ignore police and push past them. Frequently there was a single officer at control points. Some submissions to the Inquiry complained of a poor attitude by police towards people who wanted to be allowed to enter the controlled area. Probably, police at these locations were feeling frustrated by their duties as well. The Inquiry was told that there is residual ill-feeling towards police because of the road closures and the way they were handled. More thought should have been given to implementation of the road closures and at the point at which they needed to be managed by police.

Some action was taken to mitigate the impact of the road closures through escorted convoys. These began for essential service vehicles to go in to the affected areas at 7.40pm on 6 January and they continued twice daily until the highway was re-opened. Escorted convoys began coming out of the affected areas at 11.15am on 7 January and they were also conducted twice daily thereafter.

By 2.00am on 8 January approximately 395 vehicles and 750 people had been escorted out of the affected areas. At times the convoys being escorted out contained 300 vehicles.

Buses were arranged to transport vehicle owners back in to the peninsula to recover vehicles. This began on 9 January and they continued daily until all vehicles had been removed.

Approximately 1 500 vehicles were escorted out of the affected areas of the Tasman and Forestier Peninsulas.

Other arrangements could have been made when the policy was developed. An example is provided by Victoria. There is a system of wrist bands developed for use in identifying people who can access closed areas and these are pre-prepared and ready for use. The fire services also identify equipment they may need from the public and private sectors before the fire

season and these are given an appropriate pass. Further, there is a simple instruction card prepared for multi-agency use that is distributed to and carried by people who may have to be involved in road closures. A copy is provided at Appendix E.6.

To be effective, if they are to be used in a large scale way and in complex circumstances, these systems should be prepared in advance. It is difficult to establish them in an ad hoc way.

Re-opening the roads was recognised early in the operation for the Forcett fire and was a priority. It was included in the minutes of the SREMC meeting at 11.00am on 5 January with the notation:

The responsibility to open roads belongs to TASPOL, in consultation with TFS. Police and TFS priority for today will be to reopen vehicular access.

The Southern Regional Controller chaired this forum and made the following points to the Inquiry:

The location of the road blocks is generally made at the lower levels. I continued to take advice from TFS for the opening and closing of roads. I also took advice from Aurora and DHHS.

Primarily the closure of the roads was about public safety. We had a lot of wind and there were trees and power poles and other infrastructure that needed work.

There was a lot of pressure on us to open the highway. I drove down early one morning to have a look myself (9 January), I was getting very frustrated.

The highway was opened on the Friday (11 January). It was a staged approach with only residents being allowed in and then we opened it to the general public.

Reasons for the continued closure were expanded upon in the TASPOL submission. The 'cause of the fire had not been established and it was unknown if people had died'; and it was still dangerous because:

Fires were still burning and not contained.

The roads had been damaged.

Downed power lines still posed a danger.

The risk of falling trees and power poles from fire damage was high.

A dangerous environment existed because of wind and unstable structures.

[There was] the health risk of asbestos in damaged and destroyed structures.⁵⁹

No point of time is given for these reasons and it is doubtful if they all continued for the whole period of the road closures. Closures are also said to have helped police with security arrangements; however, there were still people within the closed areas, and others could gain access from sea.

⁵⁹ Submission No. 78, at p. 10

The IMT Incident Controller told the Inquiry that on 5 January their focus was to open the highway and TASPOL, the Department of Infrastructure, Energy and Resources and a small team were discussing all the options and issues; police had imposed special powers which basically handed the power to police.

The Inquiry is satisfied the importance of re-opening the roads in the Forcett fire was recognised early and was being addressed. Decision making may have been influenced by excessive caution to prevent death or injury. It is difficult to reconcile this with the fact that many people were already in the fire affected areas. The impact on people outlined above should also have been a key factor in decision making. If it was, the decision was to err on the side of not being responsible for any harm to people. Another consideration was to minimise the area affected; that is, move road closure points so fewer people are affected.

It may be that communication on the issues in a detailed way between the field and the Southern Regional Controller was not occurring as well as it might be on this issue.

Considering the size of some convoys, the number of emergency and other vehicles using the closed highway areas, and the number of people remaining within the affected areas who could have used the roads, it is difficult to understand how concerns for safety justified so much of the highway being closed for so long.

While it is recognised that it will be difficult to find a perfect solution, implementation of road closures in a more detailed and flexible way may have occurred. The prospect of getting it right is improved immeasurably by pre-planning.

It should also be noted that there is still confusion among TFS and TASPOL members involved in operations over which agency was/should have been responsible for road closure/opening decisions. This is another example where better coordination of response operations should have occurred.

Refer to PART F for further discussion on the effect of road closures on recovery.

Recommendation 36 – that Tasmania Police reviews its Emergency Traffic Management Points policy; and develops a multi-agency policy in the emergency management plans for road closures and traffic management, including clarity in decision making, coordination and sufficient operational flexibility.

Recommendation 37 – that arrangements are made for and appropriate pre-planning occurs to effectively implement the policy on road closures and traffic management.

Relocations and Evacuations

No lives were lost. This outcome is a significant achievement to which the approach to relocations/evacuations contributed. Major challenges caused by the number of people and the isolated locations were also dealt with. Nonetheless, there were shortcomings in the preparation for and implementation of relocations/evacuations which should be identified and dealt with.

TFS was the primary agency for decisions on evacuations for fires and TASPOL was a support agency.

There is no state-level policy on relocation and evacuations in the emergency plans, nor is there any reference to this topic in TFS and TASPOL Joint Bushfire Arrangements document. Even with a policy, implementation arrangements would need to be well developed.

As examples, a plan and a police evacuation guidance card are attached at Appendices E.7 and E.8 respectively.

For the purposes of this Report, the following terms are used:

- Relocation: the independent movement of people on their own volition away from an area that is likely to be impacted by an emergency with or without formal advice from a relevant authority
- Evacuation (or Directed Evacuation): the directed and planned movement of people from dangerous or potentially dangerous areas to safer areas by someone with legal authority to do so
- Immediate Evacuation: the evacuation of people at immediate risk with little or no planning and the decision to evacuate being made in the field.⁶⁰

Authority to evacuate in a bushfire situation is found in section 47 of the *Fire Service Act 1979*.

TFS policy, as is contemporary fire policy within Australia, is that the safest options when threatened by bushfires are to leave early or stay and defend, with leaving early being the safest option. People are advised not to 'flee at the last minute'.⁶¹ There is clear evidence that trying to relocate when a large bushfire is present has caused many fire fatalities.

Information supplied by TFS and available to the community provides advice and detail and the best way to plan for and approach a bushfire situation. This will not be outlined or reviewed by the Inquiry, except to draw attention to Community Fire Refuges and Nearby Safer Places:

- Community Fire Refuges (CFRs): these are buildings identified by councils to provide temporary shelter and other facilities for people relocating or evacuating from a bushfire. There are approximately 40 CFRs identified through regional emergency management committees, though they are variously described as Assembly Centres, Evacuation Centres or Recovery Centres. They are opened and managed by SES and local councils at the request of TFS⁶²
- Nearby Safer Places (NSPs): these are places of last resort where there is an imminent threat of a bushfire. They may include town centres, ground level water areas and open spaces. They are not regarded as a safe choice as there are risks in getting to and sheltering in them.⁶³

Community protection planning is an important project currently being undertaken by TFS. This involves developing Community Bushfire Protection Plans and Community Bushfire Response Plans to help the community in bushfire emergencies. Among other things, these

60 These definitions should be developed specifically for any policy that is adopted.

61 See for example, TFS Bushfire Survival Plan 2012-13.

62 Submission No. 60, at para. 4.4.

63 Tasmania Fire Service, Bushfire Survival Plan 2012-13, at p.15.

plans identify NSPs and vulnerable groups of people. Fifty three Community Bushfire Protection Plans and 45 Community Bushfire Response Plans had been developed earlier this year, with further progress still to be made.⁶⁴ Examples of these plans are provided at Appendix E.9. Developing Community Bushfire Mitigation Plans has not yet begun.

The Australian Red Cross manages a National Registration and Inquiry System, a voluntary registration system established by the Australian Government to support reuniting persons separated by disaster. Displaced persons are registered through evacuation centres or a State inquiry centre. TASPOL is the commissioning agency for Tasmania.⁶⁵

These arrangements are referred to here as they are connected to response operations; however, their operation is linked to recovery and more detail will be provided on that aspect in PART F.

In the Lake Repulse fire, as previously described, police acted proactively in approaching the community to warn them of the fire danger and to later direct an evacuation. In terms of relocation/evacuation, the Inquiry was informed that on the second occasion, police approached members of the community in the Ellendale, Fentonbury and Meadowbank areas and told them to leave.

Arrangements early on 4 January were that police would patrol until they were advised on the need to evacuate the area. There was some advice from TFS on evacuation, but police acknowledged it was not clear on the position they should take. It appears that police had a mixed approach to evacuation; some police provided advice and others directed an evacuation. People were initially told to go towards Westerway. A CFR was established at Ouse and later, another at New Norfolk. Police travelled throughout the area undertaking this operation.

The Acting Inspector told the Inquiry that the directed evacuation message was not appropriate and this was met with resistance from people. In the evening of 4 January, he developed a form of words to be consistently used:

*Our best information is that your life and property is under imminent threat of danger from fire and that you should leave now. Are you prepared to stay and defend or leave?*⁶⁶

This message was delivered to the POC on 5 January and he understood it was used by other police. Having to develop a message in this way highlights the lack of preparation on this issue. Police kept records during the Lake Repulse fire of people they approached to advise them to leave/direct evacuation, though it is not possible to be certain which were directed to leave:

- police went to 140 properties
- at 55 properties, a resident stayed to defend the property
- of these 55 properties, only five properties sustained any damage and that did not include any homes
- 12 of those who defended properties had a fire plan and only one of these recorded any property damage

64 AFAC Audit, at p. 42.

65 Submission No. 77.

66 Tasmania Police Debrief Report, at p. 57.

- 91 of the people spoken to said they had a fire plan
- another 29 properties were vacant. It is not known whether people from these properties chose to leave because of the fire risk.

Many of those approached by police were involved in a form of agriculture. Farmers particularly do not appreciate being told to leave their properties and, anecdotally, are generally better prepared to defend them. At community meetings with police after the fires, some people took issue with being directed to evacuate and felt they were threatened by police with arrest if they didn't comply.⁶⁷ In a submission from a farmers' group, it is recommended that farmers be permitted to defend their properties at their own risk, even on catastrophic days.⁶⁸ It may well be too that the exercise of the evacuation authority was precautionary and motivated to some degree by risk aversity on part of those with responsibility for community safety. As well, considering the 'leave early or stay and defend' policy, the question arises as to whether it is appropriate to have an unfettered evacuation authority.

In Victoria, the fire evacuation legislation is limited to the exemption of those with a pecuniary interest in a property.⁶⁹ Adopting a similar approach in Tasmania, with a qualification that it is reasonable for a person with a pecuniary interest to remain, should be considered.

Opening a CFR at Ouse was also problematic. People complained they would have to go through the fire ground to get there and there was no discussion or consultation with police in establishing it. The latter point is consistent with the arrangements in place between TFS and the local council. However, as police will generally be providing advice to the community on relocations or managing evacuations, there needs to be coordination between the agencies.

In the Bicheno fire there are two aspects of evacuations to mention:

- TASPOL and TFS advice to the people in Courland Bay was not a directed evacuation; however, people chose to relocate, which appears to have been a very wise decision. A hall in Bicheno was established as a CFR
- PWS evacuated up to 1 000 people from the Isaac Point and Friendly Beach areas, in accordance with its established plans.

For the Forcett fire there had been some messaging in the evening of 3 January, and this will be dealt with in PART G. Times and specific action taken on 4 January for relocation and evacuation action are confused by the pace and scale of the events. After the fire became active and spotted over the Arthur Highway, it started to move very quickly towards Dunalley and other communities, such as Boomer Bay. Fire tactics appear to have been a mixture of warning people and structural protection.

The TASPOL debrief report indicates that as the fire was at its worst and approaching Dunalley, TFS did not commit to a decision that Dunalley should be evacuated despite advice from police on the ground that this action should be taken.⁷⁰

One Sector Commander and his crews went to the Carlton River/Primrose Sands area. The

67 Tasmania Police Debrief Report, at p. 30.

68 Submission No. 52.

69 Victorian Country Fire Authority Act 1958, at s.31.

70 Tasmania Police Debrief Report, at p.45.

other two Sector Commanders, their crews, some crews from the Northern strike team, which arrived at Forcett at about 1.30pm, and the Fire Commander went to Dunalley to regroup at the Fire Station. Warning people and structural protection was being done, but as the fire front approached, tactics seemed to change to an 'immediate evacuation' model. One Sector Commander told the Inquiry that priorities changed during the day from containment to structural protection to life protection. It was apparent that the Six Operational Priorities were being used.

At the Dunalley Fire Station, crews were advised that the plan was to get people out of Dunalley, protect major assets and fall back on the hotel.

The Dunalley Hotel had previously been arranged as a NSP; there was open space and facilities there and it was also identified as one of the community assets to be protected. Nubeena had been designated as a CFR. When the fire front arrived at Dunalley and there was a massive ember attack, all fire crews were sent to the hotel. A sector commander explained that nothing more could be done in Dunalley at that time. The hotel was protected by fire crews with what has been described as an Urban Interface Technique.

Police had also decided that Dunalley needed to be evacuated. All available police at that location left other duties and helped warn people to leave. They had previously been told to go to the hotel; now they were being directed to Nubeena.

Two Sector Commanders left the hotel to warn people at Murdunna. They drove through fire and smoke on the Arthur Highway to get through, obviously at great personal risk.

Both police and fire personnel moved through the communities telling all they could locate to head to Nubeena. Police went along the Arthur Highway, going into every property they could to pass on the message, and intending to go as far as Nubeena. When they arrived at Eaglehawk Neck, police learned that this community could be under particular risk from a wind change and they decided to evacuate it. The Sergeant told the Inquiry that the message was that people were strongly advised to go. They were told to go to the beach or the jetty as NSPs.

The approach taken in Dunalley through Murdunna and along the Highway to Eaglehawk Neck was in the form of an immediate evacuation directing people to the CFR at Nubeena and NSPs.

Meanwhile other relocation action was being taken. The fire was also threatening other communities, including Connellys Marsh, Primrose Sands, the Carlton River area and Dodges Ferry. People were relocating from these places. There were more fire crews at these locations and a TFS station officer had arrived after dealing with another fire.

At Primrose Sands it was done in a more organised fashion by an off-duty police inspector with the assistance of additional police who had been sent down in the afternoon. He consulted the Station Officer on the fire risk. Warnings through the community were done in a systematic way and the initial intention was to take people through Dodges Ferry, but due to the fire risk this changed to relocating to the beach as a NSP. The inspector then undertook relocation action in Dodges Ferry.

CFRs were established at Sorell, Nubeena, Port Arthur and, informally, at Dodges Ferry.

One consequence of the immediate evacuation approach is that it led to a movement of people in circumstances which is contrary to fire safety doctrine (leave early and do not flee at the last minute). How many people stayed with structures or moved to the CFR or NSPs is not known and cannot be assessed by the Inquiry in the time it has for its Report.

Another consideration is whether earlier proactive action, such as that done by police for the Lake Repulse fire, would have made a difference in creating a better prepared community and more orderly safer relocation of people. While no one was killed, there was significant disruption to people's lives and communities, which earlier proactive action may have reduced. Property loss may also have been reduced if fire personnel had not been diverted from fire suppression and property protection to warning people. These are matters for conjecture and there is further comment in the section on Fire Strategy and Tactics.

A fortunate feature of this area on the Tasman and Forestier Peninsulas is the direct access to sea water as a NSP for most people, and it was used extensively in this way.

The importance of water access was stressed in a submission from a couple at Connellys Marsh with a waterfront home they planned to stay and defend. They misjudged the risk, expecting their house would be safe by the water and found it was too late to leave. Fortunately they had a boat and could go offshore to protect themselves and came ashore a number of times to defend their house. They make the strong point that water access was a unique factor in the fires and many people 'took to boats or simply ran into the water'. The 'waterfront was a refuge and it could easily have been a disaster if the circumstances were different'.⁷¹ Other fortunate aspects were that the sea was calm, as people were not prepared to be in the water and the safety of boats was not compromised by the weather, and the tide was high.

The focus on warning people through the combined efforts of fire and police, even in an immediate evacuation mode, and the availability of water NSPs, are highly likely to have saved lives.

The movement of people, whether by relocation or evacuation, can be an immediate part of the response to any emergency, as well as an integral aspect of recovery. In the case of the Forcett fire, in a similar way to the road closures, the initial stages of relocating people was part of the emergency. This also underlines the key link between response and recovery.

Vulnerable people are at particular risk and it is well recognised that they should be catered for. Community Bushfire Response Plans do seek to identify vulnerable people. Various submissions stressed this point. The SES has begun a project to develop arrangements to support vulnerable people during emergencies. An evacuation policy should include this matter.

In its submissions to the Inquiry, Sea Rescue Tasmania outlined activities its members were engaged in to evacuate people from beach areas and in supporting response and recovery operations, starting in the late afternoon of 4 January.⁷² In its submission to the Inquiry, Volunteering Tasmania recommended a closer involvement of their organisation in emergency management.⁷³ These highlight the importance of engaging with the community and using volunteers and community resources, especially in areas and under conditions of special risk

71 Submission No. 28.

72 Submissions No. 10 and 51.

73 Submission No. 68.

where different measures may need to be considered and taken and in recovery operations. Evacuations was an area where there was a lack of coordination on decisions to evacuate and how it should be implemented.

Apart from some discussion below on the role of municipal authorities in emergency management, an examination of the operation of the CFRs, their use as Recovery Centres and the registration of displaced people, will be addressed in PART F.

TASPOL has begun a project to develop an all-hazards evacuation policy and the Inquiry understands interim arrangements will be put into place for the 2013–14 fire season.

Recommendation 38 – that a state-level policy on evacuations be developed in the emergency management plans, including specific requirements for vulnerable people and guidelines for its implementation.

Recommendation 39 – that qualifying the evacuation authority in section 47 of the Fire Service Act 1979 be considered — by exempting those people with a pecuniary interest in a property from a directed evacuation where it is reasonable for them to remain.

Recommendation 40 – that arrangements are made and appropriate pre-planning occurs to effectively implement the policy on evacuation.

Recommendation 41 – that Tasmania Police be identified as the lead agency on evacuations.

Recommendation 42 – that decisions to open Community Fire Refuges and evacuation centres be coordinated with Tasmania Police.

Recommendation 43 – that emergency management plans specifically include processes for effectively engaging with local communities and using community resources, including volunteers.

Searching and Examining Affected Areas

Examining the areas damaged by fire was necessary for a number of reasons:

- an assessment of the damage was done to help with recovery planning (this is outlined below on the State Emergency Services and Other Agencies)
- a search was conducted by TASPOL to locate missing, injured or deceased people; and to investigate the cause of the fire.⁷⁴

A systematic approach was organised by TASPOL, comprising three stages:

- to 'look and listen'
- to 'lift and look'

⁷⁴ Submission No. 78, at pp. 13 and 14.

- to conduct a forensic examination.

Soon after the fire front had passed through Dunalley on 4 January, a multi-disciplinary triage team was flown in to the area. This team consisted of representatives from TASPOL, TFS, Ambulance Tasmania and Aurora; and its primary objective was to implement the first stage of the approach: to identify any injured or deceased people.

A search team was organised to start on 5 January with the second stage of the process: to 'lift and look'. This team's aim was to try to locate the occupants of damaged properties. This team had 70 personnel and was also multi-disciplinary, with representatives from TASPOL, the SES, the Australian Defence Force, and New South Wales Fire Service specialist building inspectors. The team was deployed each day of the program over six days. On 9 January, the team was supplemented by a specialist squad of Victoria Police officers.

The initial priority was Dunalley and searching then progressed to Forcett, Connellys Marsh and Murdunna. A search plan was developed, which was later enhanced by Geo-spatial Information Service staff from the Department of Infrastructure, Energy and Resources and aerial mapping by the Westpac Rescue Helicopter and Australian Federal Police facilities. Along with this search, once police had completed a site, a TFS fire scene inspection was conducted.

Over 1 000 properties and over 200 structures were searched and examined. A forensic examination was conducted of a number of bones fragments that were located. No human remains were found.

This process had not been used before and there were no procedures or protocols to follow. It was acknowledged that the lessons learnt could be used to develop a process for other potential mass-casualty emergencies.

Municipal Arrangements

PART C of this Report refers to the role of municipal councils under the *Emergency Management Act 2006*. The Act describes their role in similar terms to the State and Regional levels, which implies that they would operate in aligned ways. It is likely that it was not envisaged that municipal councils would have an operational role with police and the emergency services. The lack of specificity in the legislation creates ambiguity and the concept embodied in it leaves a gap in emergency management arrangements.

This problem is illustrated by the Tasman Council's operation at Nubeena. An Emergency Management Committee was established by the Council and they had prepared a Municipal Emergency Management Plan. The General Manager acted as the Municipal Coordinator. He told the Inquiry that the Committee did not meet or have a role in the emergency. He also said the council's Municipal Emergency Management Plan — running at 81 pages — was discarded as being unsuitable; he said he would want a document he could pick up and use quickly. But he explained he was 'not running the show and the scale of the emergency was too big for Council' and that 'it was obvious that the police and fire service were needed to run the show so he didn't look at the plan' (the SES Regional Officer covering this council told the Inquiry that the plan was more of a reference document).

A local recovery committee was established by the General Manager soon after the event, and

after that a joint Sorell/Tasman Affected Area Committee was set up. The CFR at Nubeena was also operated by the Council as an evacuation centre.

Expertise and resources are significant issues for councils in being able to undertake the duties expected of them. The General Manager of the Tasman Council made the point to the Inquiry that a pivotal matter is the scale and duration of an emergency relative to the council's size and capabilities. Considering the holiday season, number of people present in this area, and the isolation of the Tasman Peninsula, he said it was 'unrealistic and inappropriate or misleading' to specify the roles and responsibilities of a Council without ensuring these could be met.

This resourcing issue was reiterated by the Director of the SES, which supports the councils in preparing these responsibilities. The SES undertook a project to get councils to upgrade their plans. Of the 12 councils in the Southern Region, nine have recovery plans, though some are still in draft form. The resource capability and expertise within councils varies. Most perform the Municipal Coordinator's role 'off the side of their desk'.

The Sorell Council indicated its obligations in the Forcett fire were to:

- provide refuge to displaced persons
- provide support to the emergency services as requested
- plan and prepare the start of the recovery process
- maintain Council business services.

A planned Emergency Coordination Centre was not activated as there was very little support required from Sorell Council to the emergency agencies, and it was evident that coordination would be at the Regional level.

There are issues of preparedness for another part of the Report. However, the issues are also directly relevant to the concept of operations embodied in the *Emergency Management Act 2006* and the realistic role expected of municipal councils. There are two dimensions to this:

- can councils be expected to manage and coordinate operations at the municipal level, such as police and fire operations? There is no distinction between the municipal level and the regional and state levels in the Act. Clearly though, this is not expected. This then leaves a gap in how this might be achieved
- can councils deliver on what is expected of them?

Maintaining a role for municipal councils is important, especially for engaging community participation and resources, and building community resilience. More realistic roles for councils, provided the resources, expertise and capability are developed, are to:

- coordinate and manage council resources to support emergency operations
- establish and operate CFRs and related centres
- coordinate and manage local recovery operations
- maintain council services
- be actively involved in fire risk management.

The concept of operations for emergency management will be further discussed in PART J, including a model for addressing the gap in emergency management operations.

State Emergency Services and Other Agencies

The SES has an important role in emergency management, through a number of permanent personnel and a volunteer network, mainly providing support services.

The SES has only 24 permanent staff. Secondments from TASPOL provide two additional personnel working on specific projects. In January 2013, there were 540 SES volunteers in 35 units, though 20% are TFS volunteers as well.⁷⁵ A number of SES Emergency Operations Centres have been established.

Readiness preparations began for the SES on 3 January. Expected duties included establishing CFRs, conducting rapid impact assessments, supporting the SEMAG and SREMC; and unit responses in the field, such as helping police with road closures and warning the community. The Director of the SES told the Inquiry that SES work exceeded its capacity.

Much of the support provided by the SES related to recovery: for example, helping the Nubeena recovery and coordination centre. One of the permanent SES staff worked with the SFOC on fire operations, in various support roles.

One of the SES responsibilities is a Rapid Impact Assessment process. The purpose of this process was explained in the Department of Premier and Cabinet submission to the Inquiry:

After an emergency has occurred there is a need for the collection of timely and credible information on the impact of the event. The purpose of this information is to provide decision makers with details that can be used to set priorities in relation to the response to and recovery from the event.⁷⁶

The Rapid Impact Assessment Plan was only approved in November 2012 and it was used for the first time in the fires. Over 400 properties were visited between 5 and 10 January, and data was recorded on computer tablets. This proved to be a significant improvement on previous arrangements.

Police were critical of the coordination of this process, as it appears TFS and SES initiated the Rapid Impact Assessment procedure without consulting them. Police had a responsibility to search for injured or deceased people and there was confusion as to whether this aspect had been included or not.⁷⁷

Response, and recovery, operations were supported by a number of agencies and organisations. The Department of Infrastructure, Energy and Resources (DIER) had an important role. DIER told the Inquiry that it was contacted on 2 January for meetings on the bushfire risk and made arrangement to be ready. Responding to road infrastructure issues began on 3 January, primarily for tree inspection, felling and removal. DIER advised that it had a State Road and Bridge Emergency Management Plan and a Tasmanian Electricity Supply

⁷⁵ Submission No. 63, at p. 3.

⁷⁶ Submission No. 84, at p. 18.

⁷⁷ Tasmania Police Debrief Report, at p. 45.

Emergency Management Plan. The Inquiry is not able to say how quickly or effectively these plans were implemented.

An examination of the minutes of SREMC meetings indicates representation by a number of important organisations in this emergency; for example, Telstra, Aurora and Southern Water.⁷⁸ It is not clear how quickly and thoroughly all possible functional support was provided. These groups are mainly considered in recovery operations. They do often have an initial response role as well.

The TEMP refers to a coordination role in the structures provided, but there is no guidance on how it will be achieved. A structured approach to this area would provide a more comprehensive coverage of the support which might be required and a more timely way for it to be achieved. For example in South Australia, there are arrangements for the coordination to occur through a number of functional areas, like Agriculture and Animal Services, Communications and Defence. A State Controller is identified for each functional service and a plan is developed. Arrangements are in place for a centre to be established to coordinate these functional services. Approaching this matter by function also enables the services to be drawn together from across a range of organisations. This will be further examined in PART J.

Availability of Resources

Having sufficient resources to effectively manage response operations is both a real and a topical issue. At times police and TFS reported that they were overwhelmed by the volume of activity and stretched in their capacity. Though not desirable, it is understandable, and to some extent, it is expected, that there would be resource shortcomings where there are multiple significant fires with the risk of others occurring, and one on a scale, complexity and magnitude as the Forcett fire. The issues are whether resource availability was deficient and how improvements might be made for the future.

There were complaints by people that TFS didn't help them with the fires they were experiencing. In most cases this was a consequence of protecting people, attending higher priority fires, or having insufficient resources at that time for the volume of fire activity. It needs to be understood by the community that this will occur and it doesn't mean per se that TFS does not have sufficient resources. This is also part of the reasoning for building community resilience.

The resources available to TFS and TASPOL were the subject of submissions to the Inquiry. A substantial submission was made by the Tasmanian Branch of the United Fire Fighters Union of Australia, primarily on the issue of resourcing for TFS.⁷⁹ It was asserted that there has only been an increase of 36 full-time career officers since the 1967 fires and there were only 30 officers supporting approximately 5 000 volunteer fire fighters. Other resource issues raised include:

- the new fire arrangement for the SFOC etc. were significantly impeded by a lack of adequately-trained staff in key positions, a general lack of staff to appoint to all other positions, and fatigue associated with excessive hours
- only full-time qualified employees should be used in leadership positions
- spans of control should be limited to a ratio of 1 : 5 (that is, one leader to five personnel)

⁷⁸ Minutes of the SREMC meeting at 11.00am on 5 January.

⁷⁹ Submission No. 88.

- only qualified staff should be used in the communications area for call-taking and dispatch
- staff in command roles should have sufficient equipment
- staff managing staging areas should have adequate training
- non-rostered shift workers should be supported to maintain operational readiness and be used during emergencies
- staff fatigue needs to be managed.

In its submission to the Inquiry, the Police Association of Tasmania (PAT) also raised resourcing issues.⁸⁰ The PAT asked the Inquiry to examine why the emergency powers were not used and its relationship with an industrial award. This is an industrial issue and it is not a matter for the Inquiry to consider. A more relevant point made by the PAT involved budget issues for TASPOL and the recent reduction of police officers. It was asserted that TASPOL could not manage with its existing resources and had to request support from police outside the State. There were other resource issues raised, such as the number of vehicles available.

In a covering letter to the Inquiry, the Police Commissioner also outlined reductions in staff and vehicles and internal restructuring to meet budget reduction targets.⁸¹ He also described action taken due to the peak demands over the Christmas/New Year period and the implications of this for the availability of resources when the fires occurred. Notwithstanding this, he told the Inquiry that police volunteered to come back on duty and personnel worked extended hours in managing emergency operations.

The AFAC Audit made the following comment:

*There are a number of risks associated with the small number of people in a relatively small agency filling the large number of portfolios required. The Audit-Review identified the potential for a single point of failure existing in a number of areas where the unavailability of an individual staff member could adversely impact a number of portfolios. Major events such as the January 2013 fires impacted quickly and soon exceeded TFS, FT and PWS staff capacity. The redeployment of corporate staff into operational support roles in particular, placed pressure on routine business functions.*⁸²

Similar comments could be made about TASPOL, where a small number of personnel limit the organisation's capability, for instance the number and availability of inspectors. When there are small numbers of personnel available and expertise is an issue, care needs to be taken in building that expertise. Relying on a small number of skilled people can be a risk, for immediate availability in emergency situations and in extended operations. Multi-skilling — building a broader capability — is more often a better strategy.

Sufficient and suitable resources were an issue in a number of other areas. For example, people with expertise in managing CFR/evacuation centres were needed by councils.⁸³

80 Submission No. 79.

81 Submission No. 78.

82 AFAC Audit, at p. 27.

83 See submission by the Tasman Council and the Local Government Association Tasmania.

The Inquiry is not able to make an assessment of these issues for a number of reasons:

- it would involve closely examining a range of organisations and their operations, which is beyond the scope of the Inquiry
- in terms of TFS and TASPOL, this process would require a complete analysis of the operation and effectiveness of these organisations, and this is not feasible
- the application of resources is also a matter of priorities. The January fires would have constituted such an emergency for both TFS and TASPOL that it was their highest priority. Resources should then have been re-allocated accordingly. Thus there should always be resources which can be applied to the highest organisational priorities.

These are qualified with the comment that capacity is dependent on the overall resources available, and the issues raised by the organisations are not without merit in that sense.

Hence the initial availability of resources, continuity of resources where operations are extended, and matching experience and expertise are relevant matters to consider here.

Emergencies of the nature of the January fires will extend the capacity of any emergency operation and it is not realistic to have enough resources available for every eventuality. Therefore supplementing capacity with resources from other sources is a responsible thing to plan for.

Fire services and police have very cooperative arrangements and relationships with their colleagues within Australia and in many places overseas, and additional resources are often made available between them in emergencies. These arrangements were put into effect on this occasion.

Police within Australia and New Zealand operate under an agreement to provide assistance to neighbouring states and assistance was arranged from Victoria Police and the Australian Federal Police. Detail is provided in the TASPOL submission.⁸⁴ There are logistics issues and obviously differences in operations; however, there were few negative issues in this support. Police have the capacity to swear-in police officers from other jurisdictions so they can exercise local police authority.

Fire services have similar arrangements and again, support was provided from within Australia and New Zealand. Detail can also be found in the AFAC Audit.⁸⁵

There are also complexities with fire assistance surrounding workplace health and safety, authority, immunity from legal liability, and responsibility for the cost of deployment.⁸⁶ Steps were taken to minimise this risk on this occasion. It would be unfortunate if these issues limited the availability of this mutual assistance, and fire authorities should make it a priority to resolve. As with police, there were logistic issues and differences in operational practices and skills.

Mutual support for police and fire services is a valuable and much appreciated service.

84 Police Assistance to Neighbouring States Agreement and see submission No. 78, at pp. 28 -29.

85 AFAC Audit, at p. 28.

86 AFAC Audit, at p. 28.

Australian Defence Force assistance was also provided in searching damaged buildings and helping Aurora transport two heavy duty transformers from Queensland to the Tasman and Forestier Peninsulas. Established arrangements are in place for this to occur.⁸⁷

To support emergency operations, the State Emergency Management Committee (SEMC) has a project to establish a pool of employees across the public sector to be deployed to assist with the management or coordination of an emergency. A special emergency plan being developed for the SEMC will complement this and a draft of this was considered in July 2013.⁸⁸ The intention is to develop an initial surge capacity of 100 employees. These interoperability initiatives should provide positive results.

The AFAC Audit also referred to the training and development of 'experienced but no longer frontline retained and volunteer members [who] would provide an additional source of personnel for roles within both the SFOC and RFOCs ... The formation of a volunteer "headquarters" brigade would enable the building of such capacity'.⁸⁹ The AFAC Audit also referred to 52 volunteers being trained Sector Commanders in TFS and not used in fire ground command roles until the later stages of the fires, on advice from the Retained and Volunteer Associations.⁹⁰ The Inquiry is aware of a number of volunteers who did have command roles early in operations at the fires. Possibly there is scope for increasing this, just as there may be in using the skilled personnel within the forestry companies. The AFAC Audit suggests using these additional resources should be routine and not a redundancy issue.

In the section on Relocations and Evacuations above, there are comment and recommendation on engaging with the community and using community resources, and this is equally applicable in the broader resources context.

Resource capacity and capability is a relevant issue. Suggestions are made below on options to supplement resources.

However with good plans, there is the ability to maximise the effectiveness and efficiency of the resources available.

Recommendation 44 – that a review be conducted of the resource capacity and capability to provide effective and efficient emergency operations, including approved improvements.

Recommendation 45 – that further options to appropriately supplement the resources available for emergency management operations be examined.

Recommendation 46 – that the police and other emergency service organisations discuss their resource issues for emergency operations with the Government.

⁸⁷ Submission No. 78, at p. 28.

⁸⁸ Enhancing Interoperability Skills for the Management of Emergencies, Interoperability Arrangements for the Sharing of Skilled Resources in Tasmania, State Emergency Services projects.

⁸⁹ AFAC Audit, at pp. 27 – 28.

⁹⁰ AFAC Audit, at p. 28.

Recommendation 47 – that action be taken as a priority to resolve any legal issues on mutual assistance arrangement for fire services.

Effectiveness of Response Operations

How do you judge success in emergency response operations? This was a question considered in the Special Inquiry into the Perth Hills Bushfire 2011, and it was not able to be answered. In a parallel with this Inquiry, a significant bushfire emergency with no lives lost but enormous fire damage, it was concluded that the:

*fact that no lives were lost should not be used to claim that the response to this fire was an unmitigated success, or the State’s bushfire prevention, preparedness, response and recovery arrangements are as robust as they could be.*⁹¹

This conundrum is not lost on chief fire officers. At an Executive Forum this year, chief fire officers and commissioners considered this very issue, noting there were different ways to measure success; they too were unable to answer the question.⁹²

There were no lives lost and this is something to be grateful for. It is highly likely that the focus on protecting life and issuing warnings was a major contributor to this outcome. But so too was the proximity to water and the availability of a broad range of nearby safer places. On the other hand, there was significant property damage and it is possible that the policies which save lives also result in higher property loss.

The context should not be forgotten in this assessment. Many other fires were successfully extinguished and properties protected separate to the Lake Repulse, Forcett and Bicheno fires. It is consequently not possible for the Inquiry to provide a definitive assessment on the overall success or otherwise of the response operations.

Examining the emergency management arrangements and how effectively they were implemented might have been a suitable form to make judgements by. However, shortcomings in those arrangements were evident, though the scale and complexity of this emergency may even have challenged better arrangements.

PARTS G and H are also relevant to response operations and have been taken into account in making these comments:

- some aspects of response operations were effective, but generally there were too many areas of response operations which could have been handled better for the Inquiry to be satisfied that they were as effective as they could have been
- generally the emergency management arrangements were not as ready as they should have been to respond to a major emergency
- greater use could have been made of the predictive modelling of the Forcett fire and preventative/proactive action taken, especially in warning and protecting Dunalley
- suppression activities for the fires at Dunalley — particularly taking the Fire

91 “A Shared Responsibility”, The Report of the Perth Hills Bushfire, February 2011 Review, Government of Western Australia, at p. 135.

92 “What does success look like for fire and emergency services?”, in Fire Australia, Winter 2013, at p. 30.

Commander and crews out during the evening on 4 January while there were still active fires, and not establishing suitable alternative arrangements — is of concern to the Inquiry

- road closures and evacuations could have been handled better
- there are serious concerns with TFS communications arrangements for IMTs and how IMTs handled emergency calls
- TASPOL is dependent on regional level emergency management arrangements, and there are no structured arrangements at state level and, it appears, few established structural arrangements below regional level.

In summary, broad difficulties in the response arrangements and operations have been identified. This should not be taken to suggest that every aspect of those arrangements and operations is so categorised, rather it is an overall assessment:

- the concept of operations was not properly focused on response operations at a state level
- responsibilities were not clearly defined at a state level
- there was an over-reliance on committees
- there was no established structured arrangement for coordinating response operations across agencies and organisations
- plans were not sufficiently comprehensive and ready for implementation
- key policies issues were not determined and planned for
- facilities to support principal leadership roles in response were not well established
- arrangements were not designed to be ready for implementation
- there was not sufficient emphasis on proactive action
- there should be greater scope for the declaration of emergencies
- there should be broader access to emergency powers
- the need for three levels of emergency management is questionable
- interoperable emergency management communications are needed.

A number of recommendations have been made to improve response operations, especially for TFS and TASPOL, and it is not necessary to repeat them. In summary though:

- TFS should improve the control, continuity and accountability of its operations and ensure that the application of strategies and tactics are the most effective possible to fulfil its role
- TASPOL should expand its emergency management services to the community by making it a higher priority, broadening TASPOL's role in emergency management and developing organisation-wide capability.



Photo courtesy of Barry Davies

PART F – TRANSITION FROM RESPONSE TO RECOVERY

The Inquiry is required to report on the adequacy of the 'transition to recovery in the week following 4 January 2013'. In some respects 'transition' is an inappropriate word to use in conjunction with recovery in emergency management, as immediate recovery activities should start contemporaneously and run in parallel with the emergency response. Moreover, response activities will frequently have a recovery dimension. The Inquiry has taken this aspect of its terms of reference to mean the transition in this period from immediate recovery to longer-term recovery.

In this context, it should be noted that from 5 January, as there was an indication that a state level recovery program would be established, the Southern Region Emergency Management Committee (SREMC) focussed on immediate needs.¹

The Tasmanian Bushfire Recovery Taskforce was established and began on 11 January 2013. This Taskforce is independent, but is complemented by a Bushfire Recovery Unit in the Department of Premier and Cabinet, a Multi-Agency Recovery Committee, and a Bushfire Appeals Distribution Committee.

It is not within the Inquiry's terms of reference to consider any matters within the purview of these arrangements. Many submissions to the Inquiry do relate to issues under this longer-term recovery process and they have not been examined by the Inquiry.

The Inquiry has also construed its terms of reference to not include an examination of the prevention dimension of recovery, in particular the development of 'resilient communities'. Building resilient communities is a key policy position of governments in Australia and the Council of Australian Governments has approved a National Strategy for Disaster Resilience.

¹ Submission No. 78, at p. 10.

The concept of resilient communities is broader than recovery, but is reflected in the extent and speed of recovery in communities after an emergency. The Inquiry will comment on community resilience later in this part.

Another qualification on the breadth of the Inquiry is in respect to leadership. Effective leadership, within communities and governments, is an important part of the recovery process for communities. Providing messages of direction, purpose, support and reassurance are of great significance to the community in an emergency. The community needs to be assured that the seriousness of an emergency situation and its impact on people is recognised, all that can be done is being done; and action is being taken to restore the damage.

It is beyond the scope of this Inquiry to assess this aspect of leadership. In addition, in this context, judgements on leadership are often subjective and political in nature. For these reasons, a limited comment will be made on public information availability in the immediate recovery process.

Emergency Management Arrangements

Background

Social recovery refers to the emotional, social and physical well-being needs of emergency affected people. The Department of Health and Human Services (DHHS) delivers these services, either directly or through arrangements in place.

State Level

There is a State Recovery Sub-Committee reporting to the Security and Emergency Management Advisory Group (SEMAG).

A State Special Emergency Management Plan–Recovery was approved in November 2012 but had not been fully tested.

The State Recovery Sub-Committee is chaired by a Department of Premier and Cabinet representative. Its role is to:

- maintain the State Special Emergency Management Plan–Recovery
- promote a consistent level of recovery awareness by all agencies in Tasmania
- provide policy advice to the State Emergency Management Committee (SEMC) and SEMAG
- build relationships with the non-government sector
- agree on an annual work plan
- support the preparedness of Regional and Municipal Recovery Committees
- liaise with other functional response and recovery organisations
- provide a forum for whole-of-government input into recovery policy issues.²

From this statement, it appears there were no state level operational arrangements for recovery.

2 State Special Emergency Management Plan - Recovery, at p. 15.

Regional Level

To assist in recovery issues, each government agency provides a liaison officer to the Southern Region Emergency Management Committee (SREMC). There is a Social Recovery Sub-Committee (SRSC) established to plan and coordinate the delivery of social recovery services.³ Recovery Committees may also be set up at the municipal level. If recovery management is beyond the capacity of a council, it may make a request to the Regional Controller for assistance.

Events

The SREMC convened at 12.00pm and later at 6.00pm on 4 January (an attempt to have a meeting at 8.30am was not effective as insufficient members were able to attend). It should be noted that there are no minutes of either the midday or 6.00pm meetings on 4 January. Much of the work of the SREMC from this point related to recovery activity.⁴ No Northern Region Emergency Management Committee meetings were held, though that region was managing the Bicheno fire.

The SRSC met at 1.30pm on 4 January. An officer from the DHHS chaired the meeting and was the Coordinator for social recovery activities. He told the Inquiry that he began to prepare for the possibility of an emergency on 2 January by identifying and communicating with vulnerable DHHS clients. On 3 January, he notified partner non-government organisations, such as the Australian Red Cross and The Salvation Army, to be on stand-by.

The Inquiry was also told that the SRSC met nearly every day after 4 January and that it was more of an information-sharing arrangement as the representatives on the SRSC were responsible for performing their functions, and the meetings were not well attended for the same reason. This highlights a previous comment by the Inquiry in PART E; that committee meetings are not the best structure for managing operational responsibilities.

In terms of medium to long-term recovery management, the State Special Emergency Management Plan—Recovery specifies that:

- Regional Controllers will identify appropriate arrangements
- the State Controller has a number of options for handing over responsibility to other groups, including any Affected Area Recovery Committee formed.⁵

These arrangements are hardly sufficient for ensuring a timely and effective transition from immediate recovery to medium to long-term recovery operations.

Affected Area Recovery Committees are required to develop a plan and engage the community during the recovery process. Guidance is provided in the State Special Emergency Management Plan—Recovery on what matters to consider.⁶

The regional arrangement, through the SREMC and the SRSC, was primarily responsible for immediate recovery activities, with the SRSC coordinator actively involved in much of it.

3 State Special Emergency Management Plan - Recovery, at p. 16.

4 Submission No. 78, at p. 10.

5 State Special Emergency Management Plan - Recovery, at p. 25.

6 State Special Emergency Management Plan - Recovery, at p. 30.

As with response operations, questions arise about:

- the structure of the emergency management arrangements, in that it would be expected this emergency would be handled at a state level
- whether there was sufficient emphasis at a state level on social recovery.

Recommendation 48 – that the state level structural arrangements for managing recovery operations are reviewed.

Recommendation 49 – that a standing plan is developed to manage the transition from immediate recovery to medium and long-term recovery, and arrangements are made to ensure this plan can be effectively implemented in a timely way.

Recommendation 50 – that the State Special Emergency Management Plan—Recovery and the emergency management structure for recovery be reviewed.

Ongoing Response Operations

It is important to appreciate that response operations were continuing, especially in the Forcett fire. This was not an emergency where an event of a short duration has occurred and then recovery operations were initiated. The fire emergency continued over the 'transition' period, which limited some recovery action and caused ongoing impact on the community. During this time, Tasmania Fire Service (TFS) reported that there were conflicting priorities between response and recovery agencies, which were managed through liaison.⁷ Providing a safe working environment, for both response and recovery personnel, was also an issue to be considered.⁸

Road closures were a significant issue and this matter has been examined in PART E. Isolation of some communities and people because of a lack of access caused recovery issues and hampered recovery efforts. Minimising the locations affected by road closures and reopening the roads quickly were key issues. Certainly the reopening of the roads was a matter listed as a priority early by the Southern Regional Controller and the SEMAG, but it is not clear whether minimising the locations affected was a high priority.

In managing this use of road closures and the area and time communities were affected, it appears to the Inquiry that greater innovation and initiative may have reduced the impact. For example, more emphasis on a staged or phased approach to opening roads may have been beneficial. The Inquiry questions whether there was sufficient integration of the effect on the community and recovery issues into the approach taken to road closures.

Having experienced the significance of road closures in this emergency, police and other organisations involved in emergency management should place appropriate emphasis on minimising the locations and period of time roads are affected, and make plans accordingly.

7 Submission No. 60, at para. 3.2.

8 Submission, No. 69, at p. 4.

Refer to the section on road closures in the PART E for further discussion and recommendations on road closures.

Recommendation 51 – that appropriate plans are made to mobilise resources quickly to re-open roads affected by emergencies.

Communications and Public Information

Communications and public information were significant issues, as is usually the case for major emergencies. Often there will be initial confusion, poor information flows, and a lack of certainty. Effective recovery operations need to not only manage communications issues, but also to inform the community in a way that contributes positively to a recovery process for those who have been affected by the emergency. Leadership is an important aspect of immediate recovery and reference has been made to this in the introductory remarks for this part, with a qualification on the extent to which the Inquiry can comment.

Public information will be dealt with generally in PART G and only matters directly relevant to recovery will be considered in this part.

Communications between agencies and organisations handling recovery issues was raised in a number of submissions.⁹ This is an issue which should be specifically included in the review of recovery operations and a recommendation has been made below on the subject.

Public information on recovery is the primary area considered in this section. The Tasmanian Farmers and Graziers Association were critical of the lack of information and the coordination of information across government. It told the Inquiry there was no immediate response and there was no 'master plan' that brought together the main players. It also told the Inquiry there was no response by the Government until 7 January. A more immediate response, it submitted, was expected by its members.

The Social Recovery Coordinator told the Inquiry that he received a feeling of negativity, that government was not doing enough to help, and that in the future he would be more visible in providing government assistance.

During the immediate recovery phase, the Southern Regional Controller provided public comment on recovery operations.

The Government issued a number of media releases:

- 5 January: the DHHS urged people needing help to contact their local refuge centre
- 6 January: the Acting Premier announced details of the initial assistance available to those affected by the fires
- 6 January: the Acting Premier advised that Cabinet would meet on 7 January to plan recovery action
- 7 January: the Premier visited affected areas and said the Government would stand with victims as they rebuilt their communities

⁹ For example, the Local Government Association of Tasmania, Submission No. 82a

- 7 January: the Minister for Education and Skills said the Dunalley Primary School would be rebuilt
- 8 January: the Premier announced the formation of an interim committee to oversee the recovery phase
- 8 January: the Attorney-General announced free legal assistance for those affected by the bushfires
- 12 January: the Premier announced the Government had engaged a clean-up contractor for the fires.

Public information for those directly affected by the fires was difficult to manage because of road closures, loss of power and communications technology, isolation and ongoing response operations. There are comments in this part on how important public information was in the refuges, evacuation and recovery centres, especially from police sources. Community reassurance was also acknowledged in the visible police patrolling, notably in the Lake Repulse Fire.

One initiative in this area introduced by Tasmania Police (TASPOL) and other agencies beginning on 9 January was to conduct public information sessions at recovery centres, to reassure the community and dispel rumours. These sessions were mainly conducted at centres on the Tasman and Forestier Peninsulas and continued over the following 11 days. They were reportedly well received.

Public information arrangements should explicitly address recovery issues. Suggestions have been made in a number of submissions.

Recommendation 52 – that a public information plan be developed as a part of the State Special Emergency Plan – Recovery, for implementation in the immediate recovery phase.



Photo courtesy of Workplace Standards Tasmania

Assembly, Evacuation, Information and Recovery Centres

Councils are responsible under the State Special Emergency Management Plan—Recovery for the management of the following types of centres:

- assembly centres: established for a short time to meet immediate personal needs
- evacuation centres: where people affected can be temporarily accommodated
- information centres: listed but not described in the State Special Emergency Management Plan—Recovery
- recovery centres: a one-stop-shop arrangement that centralises a range of services.¹⁰

A number of difficulties arose with the management of these centres, which varied depending on the scale and complexity of the problems councils were facing. The centres for the Forcett fire are sufficient to illustrate the issues.

In its submission to the Inquiry, the Local Government Association of Tasmania:

- indicated there seemed to be confusion over the various types of centres and what services would be provided at each (coupled with Community Fire Refuges (CFRs) and Nearby Safer Places)
- highlighted the need for expertise to manage the various centres
- said there were transition issues as evacuation centres became recovery centres, for example, as a broader range of services arrived to be provided (as from a recovery centre) while the space was still being used as an evacuation centre.¹¹

An important function of the State Emergency Services (SES) during the fires was to support the various centres, and in its submission to the Inquiry, it endorsed the ability of CFRs to transition into recovery centres. A further consideration was that because CFR planning was still underway, CFRs in all affected areas had not been identified and previously identified recovery centres were selected for use.¹²

Sorell Council opened a CFR in its Memorial Hall on 4 January. Not long after this, demand was such that the CFR transformed into an evacuation and information centre. Bedding was provided and from 5 to 6 January, Housing Tasmania found accommodation for all of those who required it. On 7 January, the centre again transformed into a recovery centre, and a range of organisations provided services from it. As the centre moved from one form to another, the need for management, staffing, sourcing material and storage increased. Apart from these logistics, centre-related issues of note were:

- spontaneous volunteers started to come forward very soon after the fires on 4 January
- social media was positive in helping to organise support options quickly, but created severe logistics problems (for example, generating a large volume of unanticipated donated goods) and considerable confusion
- information requirements were mainly satisfied from websites, however there were some issues in obtaining specific information from the emergency agencies down

¹⁰ Tasmanian Emergency Management Plan (TEMP) Issue 6 2009, at p. 31.

¹¹ Submission No. 82a, at p. 6.

¹² Submission No. 63, at p. 9.

the Tasman and Forestier Peninsulas. There was also privacy issues, with the media wanting to film inside the centre, which was declined

- displaced livestock was not planned for, but satisfactory arrangements were made
- communications with the Regional Recovery Coordinator was difficult and frustrating.¹³

Port Arthur Historic Site was activated as an evacuation centre under the Tasman Municipal Emergency Plan in the afternoon of 4 January. Approximately 700 people were at the Site when the Arthur Highway was closed. Approximately 500 remained at the Site as an evacuation centre, after many relocated to Nubeena. Food was available at the Site, but the loss of power to the centre had a significant effect, as the wastewater treatment plant and supply of water were dependent on power. This problem was mitigated by the presence of an electrical contractor.

Information and communications also became a problem with the loss of power, and this issue has been discussed elsewhere in the Report. In the context of the evacuation centre, it made people dependent on accurate verbal information from other sources, such as police. Frustrations were experienced with different police providing contradictory information, especially about the prospect of the highway reopening.

At Nubeena similar experiences occurred, compounded by the number of people — approximately 3–4 000 people — requiring support. The General Manager of the Tasman Council described Nubeena as being inundated with people. This was clearly beyond the capacity of any pre-planning and the facilities available.



Photo courtesy of Bernard Plumpton

¹³ Submission No. 24.

The Tasman Civic Centre at Nubeena was used as the evacuation centre. Action to open the centre had begun early in the afternoon on 4 January following a message from local police. A Tasman Emergency Recovery Management Committee (TERMC), chaired by the Tasman Council General Manager was established. In its submission to the Inquiry on the evacuation centre, TERMC commented:

The period of road closure and power outage were significant contributory factors due to the reliance of these for survival basics of water, food and essentials including fuel. The abrupt road closure separated families, people were separated from dependent livestock and those with property in the fire area were unable to determine how they fared. This was contributory to the levels of anxiety which overlayed the direct impact of the emergency.¹⁴

During the afternoon on 4 January, with the impact of the fire, compounded by the highway closure and the failure of power and communications, the Social Recovery Coordinator could not obtain accurate information on the situation in Nubeena or Dunalley. He indicated to the Inquiry that the Council was responsible for handling the situation, with the SRSC only stepping in if asked.

By evening on 4 January, the Social Recovery Coordinator began to obtain information on the situation in Nubeena; people were beginning to congregate at the Tasman Civic Centre and were struggling with food. Details on the initial arrangements made through the Social Recovery Coordinator will be provided in the section on recovery activities.

At a meeting of the SREMC on the morning of 5 January, the Tasman Municipal Coordinator was included by teleconference and he informed the meeting that they were coping. However, the Regional Controller and the Social Recovery Coordinator were concerned that the Centre may be getting overwhelmed. The Social Recovery Coordinator advised the Inquiry that in the afternoon of 5 January, he spoke to the Nubeena Health Centre manager who described the situation in Nubeena as having descended into chaos and no-one was in charge. He said there was no obvious recovery leadership on site and he was concerned about public health issues. On the morning of 6 January, the Social Recovery Coordinator spoke to the Regional Controller and, based on the unofficial reports, they decided to take control of the situation at Nubeena.

In its submission to the Inquiry, the TERMC focussed on improvements for the future and particular relevant issues for the operation of centres for the Tasman Council include:

- communications and information were significant problems. Briefings from police were highly valued, but people were distressed when they were delayed, re-scheduled or cancelled without notice. There appear to have been coordination issues as police were not always aware that a briefing was scheduled. As with Port Arthur, inconsistent advice from police was a problem. A number of suggestions are made about various forms of access to information.
- back-up power generation, water supplies and notice board/communications equipment are needed. Some local generators were located for a number of the power problems occurring (for example, to pump fuel). Power outages meant many basic functions for an evacuation centre could be affected, such as pumping water and sewerage

¹⁴ Submission No. 43, at p.1.

- an Evacuation Centre Coordinator with suitable expertise should be appointed when a centre is opened
- the role of a centre in communicating with the broader community should be clarified, particularly where there is a failure of power and telecommunications
- donated goods need to be managed. Initially bedding, clothes and food were needed, but the Centre then became flooded by donations organised through social media. 'The unloading (from boats), sorting, storing and distribution of the goods caused an enormous amount of work and angst... Very sadly most of what was donated was not actually needed – simply because there was so much donated.' A more coordinated approach, with one organisation coordinating what is required and getting it dispatched to where it is necessary, would be the ideal.¹⁵

The large number of people stranded in the area of Nubeena — many of them tourists, including international travellers and those with hired vehicles — complicated the situation. Boats were organised to ferry those who wanted to leave to Hobart. This occurred reasonably quickly with the first departing Nubeena at about 11.30pm on 4 January. It was intended to register people; however, plans to do this were frustrated by people moving en masse onto the first boat. Ferrying proceeded during the night and an estimate by the local police officer was that 800–1 000 people were ferried out that night, though other estimates put the number at 1 000 people by early on 6 January.¹⁶ Overall the local officer estimated that more than 4 000 people moved out of Nubeena on ferries. There are various other reports on the number of people requiring transport out of Nubeena by ferry. Notes kept by the Social Recovery Coordinator on the night of 4 January indicate there were about 3 000 people requiring assistance at Nubeena (some may have already left on ferries). For the purpose of the Inquiry, the precise number is not material.

A centre was set up in Hobart's City Hall at midday on 5 January to receive people from the ferries. It was open for seven days and there was liaison between the SREMC and the SRSC on what was required. There were no major difficulties reported with its operation, apart from the 'perennial' communications issues.

Municipal Emergency Management Plans designate the responsibility for recording the names of people in the centres to councils. TASPOL informed the Inquiry that on the evening of 4 January this was not a priority, and many of the assembly points were CFRs or impromptu arrangements. Other displaced persons did not attend the centres. TASPOL advised that initially there was only ad hoc recording and the tracing of people was going to be problematic.

In addition to the recording needs in centres, police have a responsibility for missing persons and, as part of that, determining whether there were any fatalities. These are normally response functions, but are clearly linked to recovery, hence the discussion of this aspect in this part.

TASPOL made a formal request on 5 January for the assistance of the Australian Red Cross.¹⁷ Red Cross maintains a National Registration and Inquiry System (NRIS). This was the first time the NRIS had been activated in Tasmania. Victoria Police provided assistance in processing the information on the NRIS.

¹⁵ Submission No. 43, at p. 7.

¹⁶ Submission No. 77, at p.11.

¹⁷ Submission No. 78, at p. 12.

Red Cross also manages a large number of volunteers, who can help provide personal support to people in evacuation centres, and conduct door-to-door welfare checks. It also has outreach teams that can visit affected communities.

Red Cross had a significant involvement in a number of aspects of recovery operations. In its submission to the Inquiry, it made a number of observations:

- in its experience and considering the infrequent occurrence of large scale disaster events, the overall coordination of hazard response and relief services appeared to be generally well handled
- the NRIS was established from 5 January and operated through a State Inquiry Centre in Victoria for phone and web-based inquiries. It closed on 12 January. During its operation, it dealt with 3 420 inquiry transactions (1 850 registrations and 1 570 inquiries)
- despite deploying teams to field locations, the support for its registration operations was limited. For example, teams could not get in to the evacuation staging area at Nubeena and most people dispersed directly from the ferries when they arrived at Hobart. It was estimated that only one in ten people came to the centre at Hobart. At the time of the fires, a Red Cross volunteer at Nubeena introduced himself to the council management offering registration services, but was told it wasn't required. Volunteers reporting to a centre were told they weren't required as there were enough volunteers
- police liaison for the NRIS was effective and they played an active role in processing the information
- there is generally a poor understanding of the role of registration as a tool; the TEMP has inconsistencies and lack of clarity around the role of Red Cross; and there is limited reference to Red Cross in the recovery plan
- there is a lack of clarity around the naming of centres.¹⁸

As explained above, to manage the recovery process for the Council, a TERMC was established and on 11 January a joint Sorell/Tasman Affected Area Committee was arranged. Given the date on which the latter occurred, the Inquiry has not included it within its terms of reference, other than to note it is an important aspect of the transition to recovery.

Recommendation 53 – that evacuation centres and other centres have plans and arrangements for electrical power redundancy.

Recommendation 54 – that evacuation centres and other centres have a standard operating procedure for communications.

Recommendation 55 – that the role of Red Cross in emergency management plans and procedures for the activation of Red Cross be reviewed.

¹⁸ Submission No. 77.

Power, Telecommunications and Road Infrastructure

Power, telecommunications and road infrastructure were all seriously affected and had a significant impact on the community. A high priority was to re-establish services as soon as possible.

Other parts of this Report have discussed road closures and the associated issues. Power lines and poles on the roads was a contributing factor to the closures and these will be discussed below. Fallen trees, both on the roads and those at risk of falling were also part of the safety issues associated with road closures, along with damage to the roads.

The Department of Infrastructure Energy and Resources (DIER) has responsibility for Arthur Highway and made a submission to the Inquiry.¹⁹

DIER was actively involved in preparing for the fire risk on 4 January and that evening it arranged a crew of contractors to clear the highway of any trees. Checking and ensuring that bridges were safe and functioning was an issue over the following days, but clearing the roads was the most problematic issue. There were trees on the highway and there was a further risk from damaged trees (including those on private land) falling.

Clearing the roads of fallen and dangerous trees was carried out by contractors. There were a number of crews engaged. DIER informed the Inquiry that the cost of tree removal over a five week period was \$450 000. Considering the effect of road closures on the community, the Inquiry is not able to determine whether sufficient resources and action was taken to make the highway safe as quickly as possible.

Loss of power was a problem for the Lake Repulse and Forcett fires. Electrical power asset damage for both fires was significant, as is indicated by the loss of 80 transformers and over 700 power poles, and approximately 100 kilometres of power lines being on the ground. Many poles and power lines were on roads. Aurora Energy (Aurora), which owns the power network and is responsible for its maintenance, received 1 177 fault calls on 4 January and 3 000 of its customers were without power. Most of the impact was in the Forcett fire. Aurora indicated to the Inquiry that continuity of power supply was a high priority, though there was little included in the way of inbuilt redundancy.

An Aurora employee was in the TFS Southern Regional Incident Control Centre as a liaison officer on 4 January, and action was taken immediately to isolate power problems and begin restoration of power. Given the scale of the task in restoring power, there has been much favourable comment on the speed at which this occurred.

Following the Victorian Bushfires Royal Commission, there has been an emphasis on power line safety and Aurora has been actively involved in this field, including the prevention of fires. In 2012, Aurora's Bushfire Mitigation Strategy was reviewed and changes approved. Immediately following the January 2013 fires, an audit and review of Aurora's Strategy was undertaken and a case study of their response was prepared. All these documents have been provided to the Inquiry with Aurora's submission.²⁰ Power was restored outside the period of the Inquiry's terms of reference; however, it is noted that one of the two high voltage feeder lines was restored in two weeks.

¹⁹ Submission No. 66.

²⁰ Submission No. 95.

It has not been possible to evaluate the Aurora strategy in the period available to the Inquiry, and the Inquiry is not able to comment on this aspect except to say that it is important for DIER to be satisfied these arrangements are sound.

However there is one area the Inquiry wishes to mention. The loss of wooden poles in a fire and the obstruction of roads are predictable. Aurora indicates that 60% of its overhead distribution network is in very high bushfire risk areas. The poles damaged in the fires have been replaced with wooden poles. Consequently, this form of network poses a significant risk for future response and recovery operations, in which the State should have an interest.

Information was provided to the Inquiry by Aurora personnel that wooden poles don't perform well in fires, but they are an economically-preferred option. Underground power increases the cost by four to five times. Apparently it is intended to use concrete poles for the second line through to the Tasman and Forestier Peninsulas. Aurora has engaged a consultant to review the use of wooden poles.

There are many references in this Report to communications difficulties and the loss of power was a significant aspect of that problem. Telecommunications, particularly mobile communications and internet access, are integral features of community life today, and as the primary telecommunications carrier in this area, the effect on Telstra's services and the restoration of normal services was an important part of the recovery process.

In its submission to the Inquiry, Telstra indicated that its network remained reasonably resilient; no mobile towers or exchanges were destroyed and there was only some minor damage to cabling at Eaglehawk Neck. Several exchanges and mobile sites failed after the loss of mains power and the depletion of the back-up batteries. Some equipment was also switched off for a period at Murdunna, due to mains power issues damaging equipment. The areas most affected were in the areas of the Forcett and Bicheno fires.²¹

The following extracts from Telstra's submission outline action taken and the issues for a speedy recovery:

Telstra assets in Dunalley, Nubeena, Elbow Hill, Big Blue Hill and Koonya had power generators connected due to loss of mains power. We have standing arrangements to have generators ready to deploy in the event we need to power sites that have lost mains power. These arrangements were put in place quickly, however due to the isolated location and restrictions implemented by the emergency services we weren't able to immediately deploy these generators. ...

In the Victorian Black Saturday bushfires the largest impact to Telstra's network was as a result of loss of power – once power was restored most our network also came back on-line. ...

Our Emergency Services Liaison Officers (ESLO) were engaged with the Southern Region Emergency Management Committee to prioritise restoration in consultation with emergency services. Due to some access issues, in some cases this work was carried out by boat and helicopter. Along with other organisations in the State, Telstra found it difficult to access helicopters. ...

²¹ Submission No. 89, at p. 1.

There were times during the fires where despite being willing and able to refuel Telstra was not able to get to sites on the advice of emergency service personnel. We understand the many calls on the time of emergency service organisations and their desire, once it was safe to do so, to have escorted conveyances into fire affected areas. Telstra participated in these however the queuing and marshalling contributed to a slow journey in and out. This slowed down the ability of our technicians and contractors to check in on infrastructure, refuel it where necessary and get it back online. Once these delays were raised with the Police Telstra was able to speed up our restoration through more efficient arrangements as typically occurs in other States and Territories across the nation. ...

Given the role of telecommunications as an essential service Telstra believes that as a critical infrastructure provider we should be afforded a degree of priority to access areas when safe to do so. Telstra technicians and contractors are experienced and skilled at restoring services in difficult terrain and at times of extreme weather. Indeed many Telstra staff in Tasmania are also volunteer fire fighters or members of the State Emergency Service. We respectfully request the Inquiry investigate a means by which Critical Infrastructure Providers such as Telstra, may be given priority access to an impacted area when safe to do so. This may assist in the reduction it takes for the telecommunications network and community to recover.²²

Telstra makes the point that it is 'best not to rely on a mobile as the only way to communicate in an emergency'. Effectiveness of this form of communication can be influenced by network capacity, topography, climate and the number of users. Unfortunately the community has become quite dependent on mobile phone communications.

Telstra takes a commercial approach to the network it provides for mobile phone coverage, and argues that because of the geography and topography of Tasmania, universal mobile coverage is extremely difficult and beyond what is justified by a private company.²³ In areas such as the Tasman and Forestier Peninsulas, which may become isolated by emergency events, an improved network coverage and greater redundancy is probably desirable, with redundancy power available for a longer period than is currently the case. This is a matter for the Government and Telstra to determine.

The Inquiry is also aware that this matter is a national issue which has been discussed at both the Standing Council for Police and Emergency Management and the Council of Australian Governments.

There is further comment on the importance of mobile phones for alert and warning messages in an emergency in PART G.

Recommendation 56 – that the Department of Infrastructure Energy and Resources consult Aurora Energy on the use of wooden poles for overhead infrastructure with a view to mitigating the risk in bushfires.

22 Submission No. 89, at p. 2.

23 Submission No. 89, at p. 7.

Recommendation 57 – that the Government consider whether it should discuss options for greater phone coverage and redundancy in areas of high risk in emergency situations where there are presently telecommunications limits.

Recommendation 58 – that emergency management plans recognise the need to provide priority access to areas of emergency operations for critical infrastructure providers.



Photo courtesy of Warren Frey

Recovery Activities

The number of recovery activities was substantial and much of it was coordinated through the SREMC and the SRSC, and later the SEMAG. Some dimensions of recovery have been referred to above and in PART E (for example, the Rapid Impact Assessment process). It is not possible to itemise all activities and do them justice. An illustration of the activities will be provided. As with the response, people should not underestimate the scale and complexity of recovery operations, and many people made extremely generous commitments of time and energy to help others, including those managing the process.

Recovery arrangements began at Government level on 6 January, with a meeting of senior officials to scope out the requirements. Cabinet was briefed on 7 January and a Ministerial Committee chaired by the Premier met on 8 January. That Committee formed the Interim Recovery Committee and it was planned to establish a State Recovery Task Force and appoint a Recovery Coordinator as a priority. A Multi-Agency Recovery Committee of senior public sector officials was formed and met on 8 January, and began planning for the immediate, short-term (2 to 3 weeks) and longer-term recovery priorities. Advice on the recovery arrangement following the Victoria Bush Fires in 2009 was available. These committees initially met daily.²⁴

The Tasmanian Relief and Recovery Arrangements and the Personal Hardship and Distress Assistance Policy were activated by the Acting Premier on 6 January. This assistance was provided to affected people from 9 January. Other relief arrangements were also established and these are outlined in the Department of Premier and Cabinet's submission to the Inquiry.²⁵

A range of government agencies were directly involved in providing recovery services in addition to managing recovery operations. The submissions made by the relevant government departments should be referred to.²⁶

Social recovery was an important aspect and this was largely managed and coordinated by the SRSC. It should be noted that the SRSC was primarily involved in providing for the emergency immediate social recovery needs of people. There is comment below on some difficulties experienced in implementing these services and suggestions for improvement. The SRSC continued its operations for two weeks until the longer-term recovery was handed over to the Bushfire Recovery Taskforce.

When the Social Recovery Coordinator became aware that the Nubeena Civic Centre was struggling for food, he began to make arrangements for assistance. Transport was not immediately available to take food into the centre. He was able to send some supplies of food, water, diesel fuel and lanterns by police boat to the Nubeena Health Centre, but was unable to send two hospital technicians he had arranged to help. The goods he sent arrived at 2.00am on 5 January. He sent more food and water later this day.

On becoming concerned about the leadership and control of recovery in Nubeena on 6 January, the Social Recovery Coordinator took more control and sent food and medical supplies; two emergency service nurses; and a former Australian Defence Force nurse with overseas experience (to ensure the Centre was operating effectively). He also sent two senior

24 Submission No. 84, at pp. 23 - 29.

25 Submission No. 84, at pp. 21 -28.

26 Submissions Nos. 49, 66, 69, 83 and 85a in particular.

social workers to Dunalley, to assist where they could and to also advise the Social Recovery Coordinator on what needed to be done.

On 6 January, mixed messages were being received about the needs in Dunalley. By 7 January, there was a better understanding of what was required in Dunalley. During the next few days, a number of support services were sent into Dunalley, including Centrelink, the Salvation Army, St Vincent de Paul Society and Red Cross. A GP clinic was also established.

The Social Recovery Coordinator described the Dunalley community as starting to support itself by 8 January. However, this does not suggest that there was not a lot more to be done to support the local community.

Animal welfare was an issue raised in a number of submissions. The International Fund for Animal Welfare recommended that animal welfare be included in emergency planning and arrangements are established with the Australian Veterinary Association on services it can provide, such as a triage centre established close to the site of a fire.²⁷

During the fires, SREMC made a request to the Department of Primary Industries, Parks, Water and Environment (DPIPWE) for assistance on animal welfare. Until these fires DPIPWE was mainly concerned with animal welfare by providing advice for managing burnt livestock and wildlife, and coordinating the care for injured wildlife. Following the SREMC's request, DPIPWE deployed stock officers to assist.

A triage centre was established at Dunalley staffed by private veterinarians.²⁸

These highlight the learning which should be captured from these events. Most agencies and organisations will have debriefing procedures after major events, including the emergency services, and should have undertaken this process. However, the Inquiry is concerned (and this will be addressed in detail in PART H) that plans are set at an over-arching level without sufficient detail to be ready for implementation. If done this way, the detail of lessons learned may be lost.

Many recovery activities were also initiated and undertaken by members of the community, and these will be discussed below in the section on Community Resilience.

It should be noted that there were some issues with the clean-up contract, but as implementation of the contract was later than 11 January, it is outside the terms of reference.

Recommendation 59 – that the State Emergency Management Committee ensures that a program of debriefing on recovery issues is completed by all relevant agencies and organisations, and detailed plans and operating procedures are established ready for implementation.

²⁷ Submission No. 57.

²⁸ Submission No. 69.

Social Recovery Strategic Direction and Coordination

In its submission to the Inquiry, the DHHS commented on the immediate social recovery activities. The following relevant points are made:

- as the fire threat was continuing, the primary focus in the first week was on emergency response activities and attempting to meet the immediate physical and social needs of the community
- initially it was difficult to get an accurate assessment of the situation and support requirements in the Dunalley and Tasman Peninsula areas for the first few days
- this meant that many of the processes underpinning community support structures were set up by the community members themselves
- a lesson learnt was to get appropriate staff into the affected area early to commence community engagement and needs assessment activities
- while staff did an excellent job, their efforts would be enhanced by regular training and by developing systems and written procedures that would enable these staff to 'hit the ground running'
- development of the Major Incident Support System (a client registration and case management database) will be a valuable tool for future emergencies. This system is still in the development phase and is modified from the Victorian bushfire recovery program.²⁹

As outlined in various parts above, the Social Recovery Coordinator had concerns about leadership and management in the first few days following 4 January in Nubeena, and the lack of clarity about the situation in both Nubeena and Dunalley over this time.

The Social Recovery Coordinator also observed that the transition point from immediate to longer-term recovery varied as people were at different stages. Overall it took longer than the first week after the emergency began to transition to the Recovery Taskforce. The Taskforce took a short period to establish itself and the SRSC had to continue over that period.

A number of other points the Social Recovery Coordinator made are of substance. Once the roads were re-opened, the Southern Regional Controller advised him that he was no longer continuing in charge of the emergency; however, the Social Recovery Coordinator believed he had to continue as the Taskforce was not yet established. This caused him some concern about the legal basis for his work. The Inquiry expects that the ongoing recovery activities the Social Recovery Coordinator was involved in would most likely be covered by the normal machinery of government, and has not been able to examine this issue. It is a matter the State Emergency Management Committee can satisfy itself on.

In implementing the recovery plan, he had some dated procedures applicable before a recent restructuring of the DHHS. He had only taken up this position in April 2012 and advised the Inquiry that, while they had some procedures developed for what services would do in emergencies, they did not have governance arrangements, which were especially important given the restructuring of DHHS involved decentralisation.

The Social Recovery Coordinator said that because the State Special Emergency Management

²⁹ Submission No. 85a, at p. 4.

Plan–Recovery was a new plan, there were gaps, and they did things outside their normal scope because they could see what was needed.

Finally, the Social Recovery Coordinator told the Inquiry that input from the community on what it needed was difficult to obtain, because people were shell-shocked. He felt they asked people too many questions and instead should have been more direct in their support; that is, simply helped people to access services rather than just offer them support. Members of the community also kept asking the Social Recovery Coordinator if he could stop people approaching them wanting to help.

Red Cross made further observations on the ‘transition from relief provision (immediate food and shelter provision) to recovery support’, emphasising there was an ‘absence of strategic or operational coordination’. On checking on people for their wellbeing or provision of relief services, Red Cross suggested a well-managed program will typically:

- have a single lead agency to set objectives and strategies, and coordinate operations
- identify target properties
- define the competencies and performance requirements
- use a data mapping system
- have a formalised referral system for requests for specialist services
- integrate site visit information into multi-agency support operational planning
- have a specific communications plan.³⁰

Red Cross commented that little of the above appeared to be in place, resulting in a wide variety of experiences for people. Negative feedback was received from over-visited homes and outreach support ceased before it had reached a number of potentially impacted communities. There were examples provided to the Inquiry of people isolated in their homes who did not receive any contact from service providers.

The period of time over which this occurred is not clear, and it could be outside the period of the Inquiry’s terms of reference. However, whether observations were made outside this period or not is probably not relevant, as the cause is likely to be within that period.

In this regard, Red Cross indicated that contributing factors were within the state planning arrangements. For the past two years there has not been an equivalent to the regional social recovery committees. The SRSC began operations immediately, but in the view of Red Cross, was concentrating on short-term relief services, and did not plan for coordination with new appointments being made for the long-term recovery. It was also expected that a system from Victoria would be used, so data management appeared to be on hold pending the commissioning of the new system.

A TASPOL Inspector appointed to provide information to and reassure the affected communities was critical of the coordination of the immediate recovery. His comments include:

- no management structure was established to ensure a strategic approach was taken to community support services

30 Submission No. 77, at pp. 8-10.

- the immediate recovery was not as well coordinated as it could have been
- qualifications for the people providing assistance were not known; organisations could turn-up and their personnel would be deployed without question
- some residences received multiple visits and others were not visited at all
- the turn-over of support personnel meant there was no ongoing knowledge of what had been done.
- he raised this at the daily Agency Coordinators meeting and, although it gained some traction, there was no training management team and insufficient resources allocated for it.
- the absence of an appropriate structure and management regime could have been dealt with through the establishment of an Operations Centre, similar to that which occurred with the Port Arthur shooting in 1996.

In summary, the Inspector told the Inquiry that recovery would have benefitted from:

- validation of the credentials of persons assisting
- a structured business process (templates, databases, IT etc.)
- a strategic approach to welfare provision
- clear business rules (surrounding confidentiality, logbooks, note taking) and a negotiated approach among all service providers, including DHHS, Red Cross, various pastoral care organisations.

These issues indicate that the arrangements in place were not sufficient to ensure effective control and coordination of immediate recovery operations.

Recommendation 60 – that the State Emergency Management Committee examine whether there are any legal issues associated with continuing recovery operations where the overarching emergency management arrangements have ceased.

Recommendation 61 – that the plans for social recovery be reviewed, and plans and procedures are established ready for implementation.

Recommendation 62 – that suitable facilities are established from which to effectively control and coordinate immediate recovery operations.

Community Resilience

Community resilience is a key policy position for governments and the Inquiry wishes to refer to this without providing a detailed analysis.

An appreciation of what community resilience means and how recovery may relate to it can be derived from the National Strategy for Disaster Resilience:

Communities that possess resilient characteristics can also arrive at the other side of a crisis in a stronger position than pre-event. For example:

- *A community with well-rehearsed emergency plans*
- *Superior fire mitigation processes in cooler months*
- *Appropriate building controls, suitable to local hazards and risks*
- *Widely adopted personal and business financial mitigation measures (e.g. insurance suitable to the risks)*

Is likely to suffer less during an extreme fire event and is likely to recover quickly; financially, physically and as a community.³¹

It is often said that a crisis 'brings out the best in people' and the January 2013 fires are no exception. The concern and support from the wider community, and the communities involved in the events, would have sent a heart-warming message to those affected, and the direct assistance was extraordinary and began immediately. This is what we have come to expect from Australian communities.

In some cases the help, though well intentioned, exceeded what was required and caused difficulties for those involved in response and recovery operations. The lesson here is not so much to discourage assistance, but to focus and coordinate it in the most beneficial way.

One high-profile example involved Ms Mel Irons and the use of social media on a 'Tassie Fires We Can Help' Facebook page. This case will be dealt with in the PART G. Two other cases illustrate the value of building resilient communities.

The Dunalley Tasman Neighbourhood House (DTNH) is a community not-for-profit organisation operating from centres in Nubeena and Dunalley. A diverse range of community programs are provided, including a venue for visiting health professionals and referrals for community members to appropriate services. There are 25 volunteers who help operate the centres. After the fires, the relevant role of the centres was described as '... recovery from a social and community cohesion perspective'.³²

In Nubeena, the Tasman Community House is located close to the evacuation centre and it was opened during the emergency. A personal generator was used for power to restore communications, which was vital in what was detailed as an 'extremely confusing, overwhelming and stressful time' for people. Many people who lived locally had been

31 Attributed to the Insurance Council of Australia 2008, Improving Community Resilience to Extreme Weather Events. See the Strategy for a number of strategic priorities.

32 Submission No. 67.

evacuated, and wanted to find friends and relatives and determine if their property had been damaged. Stranded tourists also needed to change booking arrangements.

The Dunalley Neighbourhood House was opened on 8 January as soon as the coordinator could join a police convoy. Similar services to those in Nubeena were provided and it was reported that 80 people a day came to the House. In the transition from emergency to recovery, the Dunalley House was the only place many people could access communication facilities to manage lost documents, insurance claims and work demands.

Financial donations received by the DTNH have been put into a Revegetation and Garden Restoration program and 200 local households have registered for assistance.

The coordinator of this program commended the desire to have a 'community led' recovery. Recommendations include recognising the role of these programs and the assistance they can provide in recovery. To that extent the community should be involved in planning for emergencies.

In another example, a fodder relief program was established.³³ This began on 6 January and was based at the Pembroke Park Pony Club grounds at Sorell. The person who initiated this program was previously the Tasmanian Coordinator for Aussie Helpers, a drought support charity. Very significant donations of fodder were received from throughout the state, and was distributed to the Tasman Peninsula and the Ellendale areas. The coordinator said that the demand was so great that 'every time she hung up the phone there were 10 missed calls'. There was a major problem in delivering the fodder with the road closures, and they had to join police convoys, which caused significant loss of time. It is reported that hundreds of volunteers arrived to assist the program and the response to help was 'overwhelming' (care also needed to be taken with this form of program so there were no unintended consequences, such as cross-contamination of noxious weeds).

The program continued well past the period of the Inquiry's terms of reference and there were difficulties indicated in the program's submission to the Inquiry, which the Inquiry cannot deal with.

These examples also highlight the importance of using volunteers constructively in an emergency. Volunteers Tasmania is a state wide peak body for volunteering and it is acknowledged that there is a gap in 'responding to and communicating with spontaneous volunteers', and that they can help in managing volunteers in an emergency.³⁴ From 7 January Volunteers Tasmania did undertake the registration of volunteers.

Volunteers Tasmania found the 'Tassie Fires We Can Help' Facebook page challenging as it provided an avenue for 'spontaneous volunteers to be immediately activated without the assurance of safety, insurance or communication with the agencies involved in the response and recovery efforts'.³⁵ A process of matching volunteers under these conditions is used by Volunteers Tasmania. Again, it recommended becoming involved in emergency planning; specifically that:

- Volunteers Tasmania becomes a member of the State Emergency Management

33 Submission No. 73.

34 Submission No. 68, at p. 1.

35 Submission No. 68, at p. 2.

Committee and the use of volunteers is recognised and planned for

- protocols for communicating accurately to prospective volunteers are established
- education is provided across government to identify roles/tasks for volunteers.

While recognising the importance of community resilience, care should be taken in emergency management not to neglect appropriate service provision in an emergency by assuming the community will satisfy its own needs or by relying on the community where it is more appropriate for services to be provided by state or local governments. Service providers should also be aware of transition delays caused by not acting until it is determined communities aren't self-reliant.

A recommendation was made on engaging with local communities and using community resources in the section in PART E on evacuations. This recommendation is relevant to this section as well and is repeated.



Photo courtesy of Workplace Standards Tasmania

Recommendation 63 – that emergency management plans specifically include processes and resources for effectively engaging with and using local communities, including volunteers.

The Effectiveness of the Transition Recovery Arrangements and Operations

Clear measures for judging the effectiveness of the transition to recovery are not available. To some extent the State Special Emergency Management Plan–Recovery would be a method of doing this; however, for this emergency, this is not a suitable approach. Both general and individual circumstances were so varied and complicated by the way the emergency unfolded, and so prevent definitive conclusions. The emergency would also have likely tested better arrangements.

Generally, although some aspects occurred reasonably quickly (such as the first ferries arriving at Nubeena), the immediate recovery was slow to get started and not initially well focussed and coordinated.

This was partially due to the challenging circumstances: the scale and complexity of the events, poor initial information, ongoing response operations, road closures, loss of power and communications, and the isolation of the Tasman and Forestier Peninsulas.

In some cases those responsible for recovery operations were overwhelmed by the events. That may be so, but the situation would have been better managed and problems overcome quicker if there were suitable plans, facilities, and systems.

Problems in immediate recovery and transition to longer-term recovery were also caused by the emergency management arrangements in place:

- this was a state level emergency, but there were no suitable state level arrangements to manage recovery: responsibilities, structures, facilities or systems
- there was no plan for transition from immediate recovery to medium to long-term recovery
- what arrangements there were not sufficiently ready to be implemented; for example, plans were not detailed
- there was a reliance on committees and there were no suitable facilities for control and coordination available
- there was a transition delay in moving recovery from the municipal level to include regional operations

Further comment will be made in PART J on how the emergency arrangements might be improved.



Photo courtesy of Bernard Plumpton

PART G – COMMUNITY ALERTS, WARNINGS AND INFORMATION

In this part, the Inquiry reports on the use and efficacy of community alerts, warnings and information. The Inquiry has taken this aspect of its terms of reference to mean these communications specifically connected with the fires, and not community education or information generally. Community resilience and the extent to which education and information are relevant in building this capacity is dealt with in PART I.

Policy and Principles

Community alerts, warnings and information for specific emergencies take place in the context of broader community awareness and understanding of emergencies (in this case, fire risk), how risks should be managed, and the response to a particular threat by emergency services.

The Victoria Bushfire Royal Commission made a number of recommendations on bushfire safety policy and community education and warnings. Recommendation 1 is set out below, but reference should also be made to other related recommendations:

[That] The State revise its bushfire safety policy. While adopting the national Prepare. Act. Survive. Framework in Victoria, the policy should do the following:

- *Enhance the role of warnings – including providing for timely and informative advice about the predicted passage of a bushfire and the actions to be taken by people in areas potentially in its path*
- *Emphasise that all bushfires are different in ways that require an awareness of bushfire conditions, local circumstances and personal capacity*
- *Recognise that the heightened risk on the worst days demands a different response*
- *Retain those elements of the existing bushfire policy that have proved effective*
- *Strengthen the range of options available in the face of bushfire, including community refuges, bushfire shelters and evacuation*

- *Ensure that local solutions are tailored and known to communities through local bushfire planning*
- *Improve advice on the nature of bushfire and house defendability, taking into account broader landscape risks.¹*

Consequent to this recommendation, there has been a greater emphasis in Australia on having bushfire safety policies, generally with the ultimate aim of having informed and prepared communities. For example, the current Victorian policy framework has five priority areas:

- awareness and education
- community capacity building
- local community fire planning
- fire danger information and warnings
- bushfire safety options.

A draft Tasmanian Bushfire Safety Policy has been under development for a number of years for the State Fire Commission, with the current draft version dated November 2012. It is not clear to the Inquiry how the policy aligns with the State Fire Protection Plan. This plan was also prepared for the State Fire Commission by Tasmania Fire Service (TFS) and has been endorsed as a State special plan under the Tasmania Emergency Management Plan (TEMP). A 2010 version was lacking in detail on community education and warnings, and the Inquiry was provided with a revised, more detailed version, which was not in place in January 2013, but has since been approved. While some arrangements are in place for community education and warnings, notwithstanding the delay in developing the policy and plan, it is important to finalise the position on the policy without delay.

The Tasmanian Government's Communications policy is also relevant. It provides that for crisis and emergency management:

Agency emergency management protocols must include a communication plan/ protocol that:

- *Clearly defines the roles and responsibilities of communications and media liaison staff, including using their expertise in preparing messages for staff, other government agencies, the general public and the media*
- *Ensures messages are consistent by coordinating the release of information through all channels, including departmental intranet and internets*
- *Ensures there is a small pool of capable and trained spokespersons available*
- *Meets the requirements of Whole of Government Media Protocols ...²*

A further appreciation of suitable and practical arrangements is provided in the comprehensive South Australia policy, which is an appendix to the State Emergency Management Plan (SEMP), where core principles of public information and warning are listed:

- public safety is the highest priority

¹ 2009 Victoria Bushfires Royal Commission, Government of Victoria, Final Report, Volume ii, Part One, at p. 57.

² Tasmanian Government Communications Policy, Edition Two, September 2010, at p. 19.

- the primary responsibility for public information lies with the control agency as per the SEMP
- information flow should be provided regularly to keep the public informed and should only be restricted in the interests of safety and/or operational security
- public information and media responses/releases must undergo all necessary clearances by the responsible agency/ies preparing the response/release
- agencies must coordinate messages to ensure consistency of information being provided
- agencies must not make unapproved comment on, or speak on behalf of, another agency's area of responsibility
- all agencies have a responsibility to ensure adequate training and resources to respond to any situation/incident
- the above principles have been adopted from the National Security Public Information Guidelines. While they relate to the release of information on matters relevant to national security, they have equal relevance during an emergency or major incident.

The now-current version of the TEMP provides some indication of principles to apply, though it is very limited:

The following principles apply to all media arrangements:

- a. An informed community is a resilient community, so timely and accurate information being provided to the media is a priority.
- b. Commentary is limited to matters related to each agency's own role in response/community recovery.
- c. Comments outside an agency's scope are referred to the response Management Authority in the first instance.³

As noted previously, while there are references to community resilience in these policy comments, it is not intended to deal with that subject in this part.

Recommendation 64 – that the State Fire Commission finalise its position on the Tasmania Bushfire Safety Policy without further delay.

Recommendation 65 – that the State Fire Commission structures its Tasmania Bushfire Safety Policy so policy outcomes are identifiable and progress in achieving outcomes can be evaluated.

Emergency Management Arrangements

Issue 6 of the TEMP was the version of the plan in usage at the time of the January fires and this has very limited content on community warnings and public information.⁴ The new version, issue 7.1, has far more detail, but there is still no comprehensive communications policy and framework as part of the plan. In this case, TFS has relatively comprehensive

³ Tasmanian Emergency Management Plan (TEMP) Issue 7.1 2013, at p. 60.

⁴ Tasmanian Emergency Management Plan (TEMP) Issue 6 2009, at p. 51.

arrangements for its agency, but there are also complementary support services necessary by other agencies, and the TEMP needs to take an all-hazards approach to this issue. An example from the South Australian State Emergency Management Plan is provided at Appendix G.1

The TFS Community Alert Protocols for a bushfire incident provides a detailed and structured approach to community information and warnings. 'Prepare. Act. Survive.' is the core message to the community and a detailed explanation of the meaning of each of the words is outlined at Appendix G.2 of this report (and appendix 3 of the TFS Community Alert Protocols)⁵. Key elements of the TFS approach to community messages are:

- the community should not rely solely on receiving an official message
- as much information as possible should be provided through a wide range of mechanisms, so people can make safe choices
- the information will take into account the features of the fire
- structured arrangements within TFS are necessary to prepare the information
- the use of information should predict fire travel and identify potential areas of impact.⁶

Three levels of messaging are used (with 3 being the highest level):

1. 'Bushfire Advice' message: A fire has started or is being scaled down – there is no immediate danger; general information to keep up to date with developments
2. 'Bushfire Watch and Act' message: Conditions are changing; you need to start taking action now to protect you and your family.
3. 'Bushfire Emergency Warning': You are in danger and need to take action immediately. You will be impacted by fire. This message may be preceded by an emergency warning signal (a siren sound).⁷

Arrangements are established within TFS to set up an Information Unit at regional or state level, and as part of an Incident Management Team (IMT) when an IMT is on standby or is operational.

A fire Incident Controller is responsible for deciding to publish an alert, and is expected to follow the TFS Six Operational Priorities (covered in PART E) when bushfires burn out of control. The first of these priorities is to issue warnings.⁸

It is acknowledged that there is a need to provide information which can be used by people with different information needs. A Bushfire Warning and Messages Matrix can be used to identify trigger points for pre-arranged messages. This Matrix has been developed using the Fire Danger Rating Scale with the time before a fire impacts communities as the trigger point for the different messages.⁹ Its templates are only a guide and can be modified as required. The Matrix is shown at Figure G.1.

5 Tasmania Fire Service, Community Alert Protocols, Bushfire Incident, at pp. 3 and 32.

6 TFS, Community Alert Protocols, at p. 3.

7 TFS, Community Alert Protocols, at p. 3.

8 Submission No. 60, at para. 4.7.

9 Submission No. 60, at para. 4.8.

Figure G.1

Category	Fire Danger Index	<2 hrs	2-6 hrs	6-24 hrs	24 plus hrs
Catastrophic Uncontrollable and unpredictable	100+	10	10	8	Message as per Incident Controllers Instructions
Extreme uncontrollable / uncontrollable and unpredictable	75-99	10	9	6	
Severe difficult to control / uncontrollable	50-74	4	7	5	
Very High Controlled/difficult to control	25-49	4	3	2	
High Controlled/difficult to control	12-24	3	2	1	
Low – Moderate Easily controlled/ controlled	0-11	1	1	1	
Fire Danger Rating		Time to Impact			

TFS has recognised that warnings for large fire events need to be contextualised, as the same message will not necessarily be relevant to every person or community potentially affected by the fire. Multiple warnings levels may be required for the same fire. A project has been established to provide a solution to this issue. Comments made in the section on Community Responses to Alerts, Warnings and Information should be taken into account in this project.

These emergency warnings can be preceded by an alert sound which is known as a Standard Emergency Warning Signal. This warning sound is available for all forms of emergency and is generally confined to significant emergencies where an urgent safety message is required.¹⁰

Warnings in the form of an Emergency Alert can also be used. This is relatively recent innovation takes the form of telephone voice and SMS-based warnings and is an Australia-wide initiative. The first phase of this system sends automated messages to fixed phone lines and to mobile phones that have a billing address in an area which can be specified for the purpose of the message.¹¹ In November 2012, a location-based system was included to capture visitors to a specified area with a mobile phone. This latter initiative is dependent on the location and continued operation of telecommunications towers. Initially this new initiative was just for Telstra customers and an extension to Vodafone and Optus customers is expected by the end of 2013.

Arrangements for Standard Emergency Warning Signals and Emergency Alerts are only provided for in the new issue of the TEMP, but the Inquiry is satisfied that they were in place before the January fires.

¹⁰ TEMP, Issue 7.1 at p. 59.

¹¹ TEMP, Issue 7.1 at p. 59.

Messages can be sent to most media outlets in the state, automatically posted on the TFS website, and sent to the social media outlets Twitter and Facebook. Memoranda of Understanding were in place with the news media and mutual responsibilities are set out in a non-legally binding way.¹² The Australian Broadcasting Commission (ABC) in particular had become an accepted source of emergency information.

In addition to the news media, there were a number of public information services available:

- TFS had an 1800 fire information line as well as its website
- Tasmania Police (TASPOL) had a website for public information, and had been using Twitter before the fires, but was developing its Facebook capability
- the Department of Premier and Cabinet (DPAC) had some established arrangements. It manages the Tasmanian Emergency Information Service, which is a virtual call centre, using selected call centre services across Government. This centre can be linked into a National Emergency Call Centre operated for the Australian Government. A Public Information Unit and a website were also available.¹³

The use of social media will be commented on in a separate section.

Recommendation 66 – that the Tasmanian Emergency Management Plan includes a comprehensive all-hazards communications policy and plan.

Community Alerts and Warnings

On 2 January, TFS began warning the community through the media and its website about the high fire risk expected over the following days. Total Fire Bans were declared for the Southern Region on 3 January and for the State on 4 January. Access to the media on 3 January, unfortunately, was not as forthcoming as it could have been.

Community messaging began soon after the fires started and detailed timelines for the messaging is provided at Appendix G.3. The approach to messaging was comprehensive and references will only be made in this Report to specific messages where they are relevant. Each message was derived from a template form and modified with the inclusion of information as required. An example message is at Appendix G.4.

On 3 January, Bushfire Watch and Act messages were sent out for the Forcett fire; the final one was sent at 11.05pm. On 4 January, Bushfire Watch and Act messages began at 2.34am and continued through the morning. The first message to become more specific for Dunalley was at 12.25pm, when it stated:

This fire is affecting the communities of Inala Road, Gangells Road and White Hills Road, Kellevie Road NOW and has potential to impact Copping, Boomer Bay, Dunalley, Connellys Marsh, Primrose Sands and Carlton River within the next 3 hours.¹⁴

¹² Community Emergency Information Arrangement, WIN Television – Tasmania and Tasmania Fire Service 2010, and Memorandum of Understanding, Emergency Broadcasting, Tasmania Fire Service and Australian Broadcasting Corporation (Tasmania).

¹³ Submission No. 84, at p. 11.

¹⁴ Bushfire Watch and Act Message, Inala Road, FORCETT, 201651.

There is other information in the message about falling embers, smoke and ash; and advice on the stay or leave policy. At 2.25pm, the next message is sent out and the relevant area provided:

The fire is now putting the area of Copping, Dunalley, Inala Road, Gangells Road and White Hills Road, Kellevie Road NOW and has the potential to impact Boomer Bay, Connellys Marsh, Primrose Sands and Carlton River direct severe risk from the fire front within 2-4 hours.¹⁵

However, the message for the areas which could be affected by the fire is somewhat confusing. Possibly this is as the result of a quick modification of the previous message.

An Emergency Alert message was sent out, starting at 2.25pm and ending at 3.25pm, for a designated area, not including Dunalley. The message is different for voice than SMS, due to the limitation on the number of characters that can be used for SMS:

This is an emergency warning from the Tasmania Fire Service for copping, Carlton River, boomer bay and sugar loaf Rd area. Your home will be impacted by the fire in your area. Use your home for shelter or go to a safer place now if the path is clear then Listen to A B C local radio for more information or the Tasmania fire service website. (voice)¹⁶

Emergency Fire warning for greater Copping and Sugar loaf Rd area. Homes will be impacted. Seek a safe place. Info @ local radio and www.fire.tas.gov.au (SMS)¹⁷

Another Emergency Alert message was sent out, starting at 3.08pm and ending at 4.08pm, including Dunalley:

This is an emergency warning from the Tasmania Fire Service for Dunalley. Your home will be impacted by the fire in your area. Use your home for shelter or go to the safer place now if the path is clear then Listen to A B C local radio for more information or the Tasmania fire service website. (voice)¹⁸

Emergency Fire warning for Dunalley. Homes will be impacted. Seek shelter in a safe place. Info @ local radio and www.fire.tas.gov.au (SMS)¹⁹

The predictive modelling does not appear to have influenced the timing of messages or their content, on either 3 or 4 January for further south than Copping on the Arthur Highway. Nor does it appear to have led to the development of a strategy to warn Dunalley or any other community potentially affected in that area. Comment has been made in PART D on concerns about the reliability of the modelling. The point was previously made that the consequences of the fire reaching Dunalley ought to have outweighed doubt on the probability of it occurring. The TFS Community Alert Protocol acknowledges that minimising the impact of fire on communities is dependent on, among other things, using predictive information.

¹⁵ Bushfire Emergency Warning Message, Inala Road, FORCETT, 201651.

¹⁶ Campaign Summary Report, message id. I3001130.

¹⁷ Campaign Summary Report, message id. I3001130.

¹⁸ Campaign Summary Report, message id. I3001190

¹⁹ Campaign Summary Report, message id. I3001190

Recommendation 1 of the Victorian Bushfire Royal Commission also recommended that warnings include the predicted passage of a fire.

There were apparently discussions by senior fire officers during the evening of 3 January as to whether the simulation should be used to warn communities. However, warnings were limited to areas near the fire: the Copping area, including Kelleve, Marion Bay and Bream Creek Roads and the Arthur Highway. These warnings were reinforced on ABC radio early on 4 January.

This limited use of the simulation — if it was used at all for these warnings — effectively means that it wasn't used, as most of the impact on communities was further south of the areas referred to in the previous paragraph, as indicated in the simulation.

The TFS Chief Officer informed the Inquiry that the Forcett fire was the first time predictive mapping was used operationally. He explained that there was little forward deployment of resources due to the fires that were burning and the uncertainty of where they would go and what resources would be required at each incident.

In the morning of 4 January, without intervention at a senior level, it was highly unlikely that the predictive modelling would have been used operationally. The Fire Commander and fire crews at the Forcett fire were concentrating on suppression operations and the TFS Six Operational Priorities are for use when a fire is out of control. In this context, the Fire Commander may not have considered the need for a proactive approach to community messaging. The IMT had only started planning for the Forcett fire on the morning of 4 January and did not have an Incident Action Plan finalised until it became very active after midday. In any case the Inquiry has been advised that the IMT is meant to be forward looking and would not have been considering acting in the immediate operations.

The Inquiry is satisfied that there was a strong case for the use of the predictive modelling simulating the Forcett fire on 4 January. Further comment will be made later on how people respond to emergency messaging, but there should have been greater urgency and more proactive creativity in the process of delivering warnings to potentially affected areas, such as Dunalley. The police approach at the Lake Repulse fire, although not without its difficulties, indicates what action could have been taken, though the Inquiry should not be interpreted as simply saying that this is what should have been done.

Warning communities and people generally should not only be a priority when fires are burning out of control. There is a risk in the TFS Six Operational Priorities that it might be seen that way, as the priorities are intended to operate when fires are burning out of control. In PART E, the priorities are discussed and it is recommended that they are reviewed. The discussion in this part should be included in that review.

Aside from the predictive modelling issue, the timing and content of the messages could have been improved. There was an opportunity to move from the Bushfire Watch and Act message, at least between 12.25 and 2.25pm on 4 January, with more warnings being issued; and more specific meaningful content could have been used to prompt people to act. The use of words like 'potential' and 'impact' should be examined. The latter word in particular is part of emergency services jargon.



Image courtesy of Bernard Plumpton

Coincident with these messages being sent, especially as the fire came closer to Dunalley, police and fire officers on the ground had changed to an immediate evacuation approach and verbal warnings were being given to the community. This approach was in line with the TFS Six Operational Priorities, where warning the community becomes the highest priority when fires are out of control, and it appeared to be very effective as a last resort in the circumstances. Comment has been made on evacuations in PART E.

Warning and Emergency Alert messages continued to be sent out as the fires moved further south from Dunalley. Up until midnight of 4 January, more warning messages were sent to the various areas down through the Tasman Peninsula.

Some submissions to the Inquiry indicated the warnings and alerts worked well, and others complained they either did not receive a message or received it too late to be of value. For example, messages were received by people after they evacuated to the Dunalley hotel.

Much of the above discussion has focussed on Dunalley. This is not to suggest that emergency warnings were not relevant or issued in other areas; rather, the approach in Dunalley illustrates how community warnings were used for that fire and some of the difficulties with these messages.

Care does need to be taken with the wording of messages and the geographic area they are applied to. A universal message can have negative consequences for some people in a given

geographic area. This was brought to notice in the Bicheno fire, where an Emergency Alert message was issued at 2.40pm on 5 January for the Llandaff area, with the SMS message:

*Emergency Warning from Tasmania Fire Service. South Bicheno. Relocate south away from the fire now. Fire will impact in 30 min.*²⁰

For South Bicheno, this message was too broad and some people from this area drove south along the Tasman Highway towards the fire. When this was realised, another message was issued with the revision:

*Residents south of Apsley River need to move south now away from the fire.*²¹

Similarly, one submission drew attention to a message in the Forcett fire, where it was argued that Kellevie residents were urged to leave their homes and proceed along a road which was inappropriate and potentially dangerous.²²

Limitations in the technology may have partly caused the misinformation in these cases. The location-based solution will send messages to mobile phones outside the nominated area if they have been last used within that area. It is also not generally possible at present to limit the message to mobile phones in the defined area. Consequently, a mobile phone user outside the area may receive a message and move towards a dangerous area as the result of it.²³ A number of observations were made in the Australian Fire and Emergency Service Authorities Council Audit Review (AFAC Audit) on this subject, and the following recommendation was made:

*TFS should take steps to obtain cell transmission coverage maps for [location-based solution]-based [Emergency Alert] messages and take note of the need for training of staff to ensure that messages are drafted carefully and appropriately so as to take cell transmission coverage into account.*²⁴

Many people relied on ABC local radio for their emergency information, and there were submissions supporting the use of this medium. The messaging from TFS prompted people to turn to the ABC for more information. A variety of comments were made on the value of ABC bulletins to individuals, some suggesting that it was too broad for their specific circumstances, or the cricket should or should not have been on at the same time, or that comment should have been made at the outset of a bulletin to indicate what areas had changed, so that people did not have to listen to a long bulletin to find that no change had occurred for their situation. Another suggestion was that the ABC could inform people where and when they could obtain more detailed up-to-date information.

The AFAC Audit noted that during the major operational response, TFS issued over 200 community warnings and conducted more than 100 ABC radio interviews and 50 television interviews throughout the State. An observation was made that interviews were clear and

20 Campaign Summary Report, message id. I3001770.

21 Campaign Summary Report, message id. I3001790.

22 Submission No. 54.

23 AFAC Audit-Review, The Tasmanian Fires of January 2013, May 2013, at p. 32.

24 AFAC Audit, at p. 32.

concise on information and warnings to communities that were under threat on 4 January.²⁵ The AFAC Audit also commented on a report from an ABC Radio manager that 'TFS provided a high level of clarity in [its] information and messages and therefore ABC Local Radio was able to provide a high level of clarity to our listeners.'²⁶

More detailed data on its messaging is provided in the TFS submission to the Inquiry, some of which relates to a longer period. For the three fires being examined by the Inquiry, the following data over the period 2 to 5 January is relevant:

- Forcett Fire: 38 Bushfire Emergency Warnings and 34 Bushfire Watch and Act messages.
- Bicheno Fire: 15 Bushfire Emergency Warnings, 6 Bushfire Advice messages, and 5 Bushfire Watch and Act messages.
- Lake Repulse Fire: 18 Bushfire Emergency Warnings, 1 Bushfire Advice message, and 62 Bushfire Watch and Act messages.²⁷

Media outlets had difficulty with the volume of messaging to so many communities, and the ABC adopted a priority approach to relaying messaging.

Another matter to be aware of when TFS and other emergency services are considering the use of electronic forms of alerts and warnings is the possibility of power and telecommunications failures and limited mobile phone coverage, and how that may affect people's ability to receive these alerts and warnings.

The importance of mobile phones for community alerts and messaging is recognised nationally and is on the agenda of the Standing Council of Police and Emergency Management. It was also raised at the Council of Australian Governments Meeting in April 2013.

A final comment on the use of Standard Emergency Warning Signals. It was not considered necessary to use it during media messages and the AFAC Audit did not comment on this approach.

Recommendation 67 – that Tasmania Fire Service actively uses predictive modelling to design emergency communications for communities threatened by bushfire, unless there is a compelling reason for not doing so.

Recommendation 68 – that Tasmania Fire Service ensures that the priority on warning communities at risk of active bushfires is not confined to when bushfires are burning out of control.

25 AFAC Audit, at p. 30.

26 AFAC Audit, at p. 31.

27 Submission No. 60, at para. 6.1.

Public Information

Public information is provided through and derived from a variety of sources. For emergency management, public information is critically important for a number of reasons:

- it provides context for alerts and warnings that are issued, options available and action that could or should be taken
- it facilitates the recovery process by providing reassurance or necessary or useful information
- it helps determine and understand risk and how risks might be prevented or mitigated
- an informed community is a pre-condition to building community resilience.

Considering the multiplicity of uses for public information in emergency management, there are comments on this subject in a number of parts to this Report, and it is not useful to attempt to confine comments to the one area. Consequently, other relevant parts of this Report should be considered in conjunction with the discussion here. An attempt will be made in this part to avoid repetition.

Moreover, in considering this section, it should be kept in mind that in the early stages of a major emergency, as has been referred to previously, information is often either not available



Image courtesy of Mark Heather

or is confused. Also, the needs of people and how they interpret and understand information varies significantly. It is rarely possible to have everyone fully informed all the time. Social media will be dealt with in the next section.

Radio and television are an important source of public information, and have been referred to in the discussion above on alert and warning messages. Many media releases and interviews were conducted to alert and warn the community, and provide response and recovery information. While there is no suggestion to the contrary, it is important that TFS and TASPOL in particular maintain well-resourced and professional media capabilities. Some indication of the public information issues can be obtained from comments in submissions, which included:

- briefings by police at evacuation and refuge centres were highly valued and should be included in future planning. Scheduled briefings should be adhered to and publicised, and provided by well-briefed communicators²⁸
- community briefings were highly valued and an early system for them should be established. Consistent advice should be provided²⁹
- people who remained in the fire affected area felt the generic ABC radio information was not sufficiently specific³⁰
- there is a need for frequent and comprehensive updates on road closures and other events³¹
- frequent use was made of the TFS and TASPOL websites³²
- in the majority of the Ellendale area, there was no communication by the normal source of ABC radio updates, no mobile phone or internet coverage, and people relied on the police physically door-knocking the area³³
- there were no formal arrangements for translation and interpretation services.³⁴

TFS has a public website which can also be accessed from mobile phones. Initially it was a copy of the Victorian Country Fire Service website, but it has been substantially changed and modified. Part of the change has been to upgrade the resilience of the system following a failure in 2010 when it was overloaded. The performance target for this aspect of the website is to enable every person in Tasmania to request a page every 15 minutes, or two million page views per hour. TFS reports that during the 2012–13 fire season, the maximum page views reached 1.6 million in a 24 hour period.³⁵ There were some issues with consistency and coordination of messages with police, particularly on road closures, and this was overcome with a hyperlink between the two agencies' websites.

TFS also maintains a 24-hour telephone Fire Information Line. During business hours, the line terminates at the relevant Regional Fire Operations Centre; after hours, it is transferred to the

28 Submission No. 82a.

29 Submission No. 43.

30 Submission No. 43.

31 Submission No. 43.

32 Submission No. 24

33 Submission No. 27.

34 Submission No. 84.

35 Submission No. 60, at para. 6.7.

FireComm call taking and dispatch centre. During the January fires, the Fire Information Line could not handle the volume of calls being received; people resorted to (inappropriately) using the 000 line for information, and calls were transferred to the Government call centre, which will be discussed below.³⁶

TASPOL used its website extensively to provide information to the community on the fires, and the early discrepancies with the TFS website, as indicated above, were rectified.³⁷

Considering the scale and complexity of this fire emergency, a whole-of-government approach to public information was necessary, and there were a number of facilities available for this purpose.

The Tasmanian Emergency Information Service was placed on standby early in the afternoon on 4 January and became operational at 8.00pm that night, receiving calls on a Bushfire Hotline number. It operated continuously for the next 26 hours and then entered into an arrangement with the National Emergency Call Centre for that centre to handle overnight calls. Operators had access to the TFS and TASPOL websites and were provided information in 'frequently asked question' form. Over 4000 calls were received during the first day of Tasmanian Emergency Information Service operations; up until 14 January, it had received 8 000 calls.

The limited knowledge and access to information that operators had restricted the information that could be provided. TFS sought to overcome this problem by deploying a TFS member to the Tasmanian Emergency Information Service.³⁸ Staffing with a sufficient number of trained operators was an issue for extended operations. An alternative arrangement of the use of the Centrelink call centres was suggested in the AFAC Audit report.

A Public Information Unit can also be established within the DPAC. This unit is principally designed to support the State Crisis Centre, but was used more broadly for this emergency. Essentially, the Public Information Unit is responsible for developing a whole-of-government media and public information strategy. It began operations on 5 January.

Return Home information packs were developed by the Public Information Unit. TASPOL began distributing these at community meetings from 8 January and later, at police traffic management points on the Arthur Highway. They were also distributed at information sessions and through Information and Service Hubs.³⁹

Comments in PART F on the transition to recovery indicate that the approach to public information immediately following the fires on 4 January could have been improved, and a recommendation is made that there be a public information strategy developed as part of the recovery plan.

The State Emergency Management Committee has commissioned a number of projects following the fires. One of these relates to establishing a State Emergency Public Information Management Strategy. In its submission to the Inquiry, DPAC indicates it will 'identify the

36 AFAC Audit, at p. 31.

37 Submission No. 78, at p. 24.

38 AFAC Audit, at p. 31.

39 Submission No. 84, at p. 35.

communication tools and channels available and provide guidance to agencies regarding their use in emergencies'.⁴⁰

It is hoped that a different approach is taken to the content of this strategy than has been the case with many other aspects of emergency management, so that a strategy will be ready to use if needed, by providing sufficient guidance on how a public information program should be implemented immediately a major emergency occurs. Hence, the recommendation made in PART F.

Another project will complement this initiative by clarifying the criteria for activating whole-of-government public information support arrangements in an emergency, especially when the State Crisis Centre is not activated.⁴¹

There are two other projects underway relating to the use of social media, and they will be referred to in the next section.

The Use of Social Media

The terms of reference specifically require the Inquiry to examine the use and efficacy of the various forms of social media by '(a) authorities responding to bushfires, and (b) private citizens during the fires, and the adequacy of existing arrangements for dealing with that use in a constructive and safe manner'.⁴² Though the terms of reference only identify authorities 'responding' to the fires, the Inquiry has taken this reference to include both response and recovery operations.⁴³

It is likely this term of reference is, at least partly, due to the 'Tassie Fires – We can help' Facebook page, set up during the fires by Mel Irons. This page is discussed below.

In an emergency, to satisfy broader community information needs for response and recovery purposes, the government sector should be the primary source of reliable and authoritative information. Today, many people (especially younger people) use social media as a source of information and a form of communication; and its use is increasing. People will seek to fill any shortcomings in public information by accessing alternative sources such as social media. Considering current communications practices in the community, it can be expected that social media will be used during emergencies.

Use of social media by agencies with an immediate role in emergency management operations across government varies, and there is potential for much greater use of this medium. Websites are in common use among government agencies and can be improved, as has been discussed in part in previous sections. The Inquiry has not sought to analyse the content of these websites to determine whether any of them can individually be improved. Best practice standards suggest agencies maximise the potential of these sites by ensuring they fully use contemporary technological capabilities. This approach should be a starting point in establishing a readily available information base for the community.

40 Submission No. 84, at p. 19.

41 Submission No. 84, at p. 19.

42 Refer to the appendix for a full copy of the Inquiry Terms of Reference

43 In any case, part 7 of the terms of reference enable the Inquiry to examine any other relevant matters.

Tasmania Fire Service

TFS has a Facebook page. Information provided includes direct input from the TFS call taking and dispatch system and alerts; general information was also posted during the fires. All TFS messaging to social media is designed to redirect people to its website or ABC local radio for further information. At the time of its submission to the Inquiry, TFS advised it did not respond to posts on its Facebook page or engage with social media users directly. When an Incident Management Team is established, public information officers will attempt to monitor Twitter and Facebook, to identify information which may be of operational value and to ensure public conversations are consistent with the alerts TFS has provided. There was very limited use during the fires by individual officers of their personal Facebook pages to respond to posts from people wanting further information.⁴⁴

Further, in its submission, TFS indicated it was not in a position to monitor the use of social media in a formal way or to engage with users on a one-on-one basis, and it was noticed some parts of its website were 'cut and pasted' by some people into their own Facebook page.⁴⁵

Tasmania Police

Before the fires, TASPOL was using Twitter but still developing its Facebook capability.⁴⁶

The Public Information Unit

This Unit began using social media during the fires. A Twitter account was established and DPAC advised the Inquiry that it quickly developed a following. As new information or facts came in, they could be quickly sent out on Twitter. However, rather than create a new Facebook page specifically for the emergency, the Unit developed a relationship directly with their existing Facebook users.⁴⁷

In contrast to the relatively limited use of social media by agencies and organisations managing the emergency, some sections of the community made extensive use of this form of communication, as is illustrated below.

Case Study: Mel Irons and the 'Tassie Fires – We can help' Facebook page

Mel Irons is a PhD Candidate at the School of Psychology at the University of Tasmania and also runs her own personal training/coaching business.

On 4 January she was listening to the ABC and watching the TFS website, keeping an eye on reports of the fires.

Mel saw there was extensive activity on Facebook about the fires; in particular, she noticed many offers for help being posted and, to a lesser extent, requests for help. She also noticed a 'huge amount of chaos' and confusion, and recognised there was an urgent need for a central hub of information. She could see great potential to help the areas affected by fire through engaging the community.

44 Submission No. 60, at para. 6.4.

45 Submission No. 60, at para. 6.4.

46 Submission No. 78, at p. 24.

47 Submission No. 84, at p. 35.

So Mel created the Facebook page 'Tassie Fires – We Can Help' and rang ABC radio around 9.45am on 4 January to tell it about the page. Activity on the page soared very quickly; within 24 hours, it had amassed 17 000 likes. People heard about the page from the radio, but most people actually saw it on Facebook first.

Mel spent the first 48 hours making key contacts, working out what to do, and waiting for information to come to her so she could do something about it; even if it was just to pass information on. In the first hour, there were posts with offers of help from a number of animal hospitals, Bonorong Wildlife Park, baby sitters and child carers, a reptile handler, and information about donations to St Vincent de Paul. During the first night, there were offers of basics such as food, water and accommodation, requests about missing relatives, Telstra making pay phones free, and assistance with medications.

Engagement with the page continued to soar and Mel was heard on radio, seen in the newspapers and acknowledged by high profile people such as the Tasmanian Premier. This generated even greater awareness about the page and what Mel was trying to do.

From the very beginning, Mel placed her personal contact information on the page, which she believes gave the site credibility. People emailed or called her if there were any issues needing to be followed up.

As the page became more and more popular, Mel realised she needed somewhere to place key information (such as details for key contacts or important organisations) so people didn't have to trawl through thousands of posts to find the information they needed. She created a temporary website (www.tassiefireswecanhelp.org) and then a permanent website (www.tassiefireswecanhelp.com).

What did 'Tassie Fires – We Can Help' do? First and foremost, it used a form of technology that was already popular and regularly used in the general population. It provided access to help and information even when roads were blocked and there was no power. That access allowed people to connect and communicate in previously unknown levels regardless of those restrictions. It provided a channel for people wanting to help to be connected to those needing their help. It provided a forum for people to tell their story, share their experiences and receive support. It also provided a focus for fundraising.

In this example, social media was used to mobilise the community to volunteer help and provide donated goods. However, there are risks associated with encouraging support from the community in an uncontrolled way during the highly emotional circumstances of a major emergency. Issues raised with the Inquiry include:

- substantial quantities of donated goods arrived at locations, such as the centres at Sorell and Nubeena, which were not required or exceeded the need. These goods had to be managed and this distracted people from other responsibilities and became another problem to be dealt with
- people with boats were encouraged to assist with evacuations without checking on the competency of boat operators or the suitability of boats
- volunteers were encouraged without an assessment of their capabilities or the protection of insurance

- it was suggested that volunteer gun owners be allowed to go into affected areas to help with putting down badly affected animals (the Department of Primary Industries, Parks, Water and Environment intervened on this posting).⁴⁸

Social media also enabled people to access information more quickly, to share information with others, and to make direct contact with agencies. In some cases, people could share information real-time as events were happening around them in the fires.

Risks can be summarised as:

- posting or tweeting unreliable information
- disaffected, disgruntled and anti-social people (including 'trolls') posting or tweeting inappropriate information or comments
- perpetuating rumours
- encouraging people to take inappropriate risks
- not matching skills to tasks
- creating unrealistic expectations
- lack of insurance protection
- lack of support for volunteers.

Social media is a reality. Mel Irons argued that there are risks in not using it for emergency management purposes, including:

- information will be in the social media environment and it is better to 'control' it appropriately
- donations and volunteers can be directed
- social media information will reduce calls to the emergency services
- traditional news media may not reach people who use social media as their only source of information
- social media brings the emergency closer to people who want to help.
- social media has the potential to contribute to developing community resilience.

There were other instances where the use of social media supported community self-help, such as the fodder program discussed in PART F. Consequently, use of social media should be recognised and a position on its use by the government sector and in emergencies should be established.

A key policy decision would be where the government sector and agencies want to position themselves in the information environment. The likely answer is that they would want to be seen as the reliable or authoritative source of information during an emergency. This

48 Submission No. 69.

positioning is consistent with people's expectations, revealed in research conducted into the use of social media in emergencies.⁴⁹ This research argues that:

Two aspects of social media of particular relevance to their use in the context of natural disasters are their ability to provide access to timely public safety-related information from official and informal sources and their ability to enable connectedness; both to loved ones and to the broader community, providing reassurance, support and routes for assistance.⁵⁰

The people surveyed in this research had set up and managed community Facebook sites for a recent flooding event in Queensland; or were active in posting to such sites. When asked how much they would rely on social media or official sources of information, 56% said they would rely equally on both, 38% said they would rely more on official sources, and only 6% would rely more on Facebook information.⁵¹

It is also likely that the government sector and agencies would not want to be directly involved in all activities on social media during an emergency (for example, calling for donated goods) for reasons of accountability and as part of building community resilience. A better position would be to influence the manner in which certain activities are managed; for example, dispelling rumours and directing volunteers to established processes.

An example of the extensive use of social media is provided by the police media team in the Queensland Police Service (QPS). Details can be found in its case study on its use during a cyclone emergency. Facebook, Twitter and YouTube were used to provide disaster-related information as soon as it became available, live video streams, summaries of media conferences, and 'myth busting' of misinformation. Media conferences included Auslan sign language interpreters, and conference summaries were translated into different languages. The Facebook page was moderated 24 hours a day.

The QPS media site became the authoritative site across government and in the community. Its success was attributed to:

- the site's ability to put out a large amount of information to the community quickly, ensuring there was no vacuum of official information
- its information could go directly to the community without having to rely on the media
- it dealt with rumours quickly
- it allowed immediate feedback to be received from the community
- it was supported by the media.

Significant resource commitments would be necessary to establish arrangements on the scale of the QPS model, and such a commitment may not be possible for all jurisdictions in Australia. Nonetheless it provides a model for consideration.

49 The role of social media as psychological first aid as a support to community resilience building. A Facebook study from 'Cyclone Yasi Update', by Mel Taylor, Garrett Wells, Gwyneth Howell, and Beverley Raphael, in *The Australian Journal of Emergency Management*, Volume 27, No. 1 February 2012, at p. 20.

50 The role of social media as psychological first aid, at p. 20.

51 The role of social media as psychological first aid, at p. 23.

A project has been established by the Security and Emergency Management Advisory Group (SEMAG) to develop a Tasmanian Government Emergency Management Website. This concept was first considered by the State Emergency Management Committee in 2008, to deal with the issue of the community having to access multiple websites to obtain information and advice on emergency-related topics. The Project Business Plan was approved by the SEMAG in July 2013; the project has had a long gestation period.

A consultant advised that most existing Government infrastructure was not adequate to cope with the high-traffic scenario expected in an emergency. The agreed option was to establish an aggregation website to provide a whole-of-government approach, but which did not replace existing emergency service websites. The January fires have provided an insight into the use of social media in this website.

The website is intended to have two main uses:

- to provide information on emergencies
- to help the community be prepared for each type of emergency likely to be experienced in Tasmania (in support of the National Strategy for Disaster Resilience).

A social media aggregation will be provided using social media posts from government agencies. The first phase will not be open to community social media interaction. An option of using Facebook to send messages out to targeted groups is being examined. The Inquiry was informed that the website is primarily intended to be a one-stop-shop location for the community to access information in an emergency, and this will be kept 'as light as possible' to push people out to other websites.

It seems from this description that social media will be used sparingly at this stage. However, the Inquiry is aware that another project is examining the use of social media in emergencies, as referred to above in this part, and it is to be hoped that the two projects will inform each other in this respect.

A related subject is the extent to which government agencies use social media for their normal operations and services and its availability at times of emergency. The Inquiry cannot examine this matter across the public sector, but has examined the use of social media by TFS and TASPOL to some degree. Both these agencies should be considering how they can fully use modern forms of communication to improve their services, especially TASPOL. This would have the benefit of improving their present services and have a well-developed capability that can be used immediately in emergency situations.

Recommendation 69 – that the State Emergency Management Committee makes timely decisions and resource commitments on the appropriate use of social media in emergency management.

Recommendation 70 - that the State Emergency Management Committee makes arrangements to actively manage the use of social media in the community during an emergency, to avoid negative consequences for emergency operations.

Recommendation 71 - that Tasmania Fire Service and Tasmania Police reviews their use of modern forms of communication with the community, including social media, and commit resources to fully use this capability where appropriate.

Community Responses to Alerts, Warnings and Information

To understand the effectiveness of bushfire alerts, warnings and public information, research has been conducted by the then Bushfire Cooperative Research Centre⁵² to evaluate how people respond to these forms of communication and the threat of bushfire. The Centre provided a preliminary report to the Inquiry. This report includes an evaluation of the preparations people made for bushfire but, as the Inquiry is examining communications in the immediate context of the fires, no comment will be made on the longer-term preparations in this part.

Following the Forcett fire, the Centre conducted 160 interviews in January of residents of the affected areas; people visiting or travelling through the area during the fire were not included.

Key relevant findings in the research were:

- those who prepared for the fires, whether they were long-term or short-term preparations, mainly reported they initiated this action because of common sense (more than 45%) and experience from living in a rural area (40%). The least reported resources for this purpose were community meetings (less than 5%), an official website (less than 5%) and official documents (10%)
- for those who prepared on the day of the fire, they were influenced by TFS (28%), the media (23%) or the experience of a past fire (28%). The most reported reason was listed as 'other' (nearly 50%) and this included a variety of influences, such as family and friends and a desire to protect their home



Image courtesy of Mark Heather

- the most frequently reported action taken on the day of the fire was 'left just in time' (23%), 'left well before the fire' (18%), and 'successfully defended the home' (22%). The least reported action was those who were not at home deliberately because of the fire danger (1%). Males most frequently reported successfully defending the home and females reported most frequently leaving before the fire
- those with responsibility for dependents and pets (36%) were mainly influenced by these responsibilities in their decision making (69%) or had made plans for them (79%)
- the most common ways of becoming aware of the fires was through seeing or smelling smoke (29%) or by being contacted by friends/neighbours/family (22%) or by receiving a warning via the radio (13%)
- the preferred method of receiving an emergency warning was mobile phone (36%), radio (28%) or face-to-face communication (16%). Many residents didn't report using the TFS website because power was cut off
- the most frequent intention was to leave when the threat became apparent (28%) or stay and defend the property (22%). Other significant intentions were to wait and see and then decide (16%) or to leave early (15%)
- after learning a fire was in the area, the most frequent actions taken were to turn on the radio for information (61%), collect valuables (54%) and to telephone friends/neighbours/family (41%). The least reported actions were to email friends, log on to Facebook or Twitter, or look at a website other than the TFS website.
- 33% took decisive action more than two hours before the fire arrived, but 22% did not act until immediately before the fire arrived
- the trigger for people to leave their home were varied: they could see or smell smoke (38%), received official warnings (37%), could see flames in the distance (32%), could see flames close by (24%) and had completed defensive action (21%). Other reasons amounted to almost 20%
- most frequently, they went to a nearby safer place other than one in their plan or identified by TFS (32%). 27% and 26% went to a place identified in their plan or by TFS respectively. 32% sheltered in a building, 32% sheltered in a car, 26% sheltered in the open and 9% sheltered in the sea
- 46% reported using a fire refuge or an evacuation or recovery centre
- the three most often reported reasons for survival were leaving early, planning and preparing, and emergency warnings.

The Centre's report also commented on a number of communication issues. It should be noted that this preliminary report notes that more substantive themes will be provided in the final report. Observations include:

- emergency information on the day was often too general, across Emergency Alerts, the TFS website and radio broadcasts
- up-to-date information about the current location of the fire and the prevailing weather would have given them a better understanding
- it was misleading to call it the Forcett fire and this affected the immediate response of some because they did not associate the fire with their area

- Emergency Alert messages on landlines was useful if received in time
- Emergency Alert messages were useful if received before the fire arrived – there was a common issue with the timeliness of these messages. In part this may have been due to the poor mobile reception in the area and damage to power infrastructure
- the TFS website lacked detail and did not have up-to-date information
- a graphic of the real-time location on the TFS website was needed
- Bushfire Watch and Act messages sometimes confused and stressed residents about what to do next
- battery-operated radios were the most common source of information
- ABC radio was useful and effective, mispronunciations caused some confusion
- a mixed message approach to warning people is important
- door knocking was an effective form of warning and people were very positive about police and fire actions in this regard
- residents were critical of commercial radio for providing misleading and incorrect information.⁵³

The Inquiry has sought to locate some benchmarks from other reports of a similar kind, in order to make some assessment of the relativity of these responses, but there are variations in the reports.

The Centre's research is the first of its kind in Tasmania and as it is a preliminary report, care needs to be taken in interpreting its findings until the final report is available. It may be difficult even then to be too specific about the outcomes as the sample size is small, it only included residents of the affected areas, responses may be influenced by personal circumstances, and there is a wide variety of responses. However, what it does indicate is that people respond differently before and during bushfires and this should be taken into account when designing communication campaigns.

Research has also recently been conducted in Victoria to examine the community response to fire threats in areas affected by three of the more significant fires in 2012–13.⁵⁴ The research was intended to examine progress in achieving the Victorian Bushfire Safety Policy Framework, which has five key policy areas, and to obtain a better understanding of how people prepare for and respond to fire threats.

The key policy area on 'fire danger information and warnings' is directly relevant to the discussion in this part, and the research found that people were active participants in the warning process, receiving, interpreting and passing on information to others. Most people became aware of fire threats through their networks and they generally wanted specific information about the nature of the threat to them and the action they could take.

Patterns of behaviour in people were observed and seven archetypal groups identified. However, it was stressed to the Inquiry that those who fitted these categories were not

53 Preliminary Report on the January 2013 Fires, at pp. 30 and 31.

54 Review of the Community Response in Recent Bushfires, Fire Services Commissioner, Government of Victoria, 31 July 2013.

rigidly characterised, and they may vary depending on any change in their or the surrounding circumstances. A better understanding on the different ways people approach and think about fire risk is important. It also reinforces that a one-size-fits-all approach to warnings and information is less likely to be as effective as one that tailors its approach to motivating different types of people. The research suggests a number of opportunities for improving the use of alerts and warnings and providing information, such as:

- making better use of local networks for passing on information
- using telephone alerting more extensively, and not limiting it to emergency warnings
- changing the form and content of alerts and warnings to make them more specific and helpful for people in understanding how they may be affected
- increasing the capabilities of information units.

This Victorian research is very informative and while it will require careful analysis and understanding, and may need to be supplemented by further research, it reinforces the point that there should be a more informed approach to communicating with people. Blanket, routine and inflexible approaches are likely to only have a limited success. TFS should review its communication approach, especially for alerts and warning messages, and consider:

- designing information, alerts and warning campaigns to fit the circumstances of particular fires and those who are likely to be affected by them
- adopting a proactive preventative approach wherever possible
- using multiple methods of communication where suitable
- tailoring the form and wording of information, alerts and warnings to suit different groups of people
- carefully considering words that are used
- issuing different alerts and warnings in the same fire where suitable
- catering for culturally and linguistically diverse people and vulnerable groups.

Recommendation 72 – that Tasmania Fire Service review its approach to communicating with communities threatened by bushfire and consider the matters referred to in this Report.

Recommendation 73 – that Tasmania Fire Service promotes a structured approach to research across Australia, to provide a shared understanding and the capacity to benchmark and judge performance.

Recommendation 74 – that Tasmania Fire Service develops a research base from which to inform the design of communication campaigns for communities threatened by bushfire.

The Effectiveness of Community Alerts, Warnings and Information

In emergencies, public information is critical and, while the means of providing information have increased significantly in this communications/information age, so too has the demand. The

approach taken to providing public information was reasonable, lessons have been learned, and action is being taken to enhance future capabilities.

Social media provides a means of improving public information and issuing warnings. It was used to some extent for public information but, given the level of capability available to agencies at the time of the fires, it could not have been a major part of a communications strategy. Again action is being taken to enhance capability in this area, though it is likely that this won't go as far as it could do.

Very little was done to actively control the negative consequences of people using social media in emergencies at the time of the fires. Plans and arrangements should be made to achieve some measure of control in the future.

Alerts and warnings were used extensively, undoubtedly more so than at any other time. Protection of life through warnings was a higher priority for TFS.

There were some difficulties with Emergency Alerts, and improvements can be made with the timing and content of messages, as well as the manner in which message campaigns are designed.

The most disappointing aspect of warnings was the failure to sufficiently use the predictive modelling in a proactive/preventative way in warning affected communities. The Inquiry is



Image courtesy of Bernard Plumpton

unconvinced by the explanation provided. To the contrary, there was every reason to use the simulation provided. There are doubts whether the structure of the TFS control arrangements are sufficiently robust to be more proactive in a strategic way. Delivering warnings to people under threat in an immediate evacuation mode, as was done when the Forcett fire was burning out of control towards Dunalley, is not a satisfactory alternative. In the process of saving lives it probably also put lives at risk.

Overall, though it is not possible to be definitive, the extensive use of warning messages and the emergency warnings by TFS and TASPOL personnel in the field is likely to have contributed to saving lives.



Photo courtesy of Bernard Plumpton

PART H – PREPARATION AND PLANNING

The Inquiry's term of reference for preparation and planning is potentially extremely broad. It is not possible to comprehensively examine the preparation and planning of 'all levels of government, agencies and the emergency services' in the time and with the resources available.

However, the terms of reference also specify that the 'focus of this Inquiry is on the strategic, systemic and organisational level'. In applying this requirement to preparation and planning, the Inquiry will provide a representative assessment of this aspect of the emergency management arrangements. Moreover, as good governance in the public sector requires an ongoing process of establishing, enhancing and maintaining emergency management preparedness, it is preferable to also concentrate on a process where this outcome can be achieved.

It should be noted that, notwithstanding its relevance to preparation, the effectiveness of strategies and plans to manage bushfire risk will be examined in PART I.

For reasons explained below, the Inquiry has adopted a 'readiness' approach to its assessment of how prepared the emergency management arrangements were.

In other parts of this Report there has been discussion and commentary on emergency management arrangements which reflects on their readiness, and it is proposed in this part to draw this together without reiterating the examination. It is likely a reader of this Report will have already started to form an opinion on the state of readiness of the emergency management arrangements. Additional areas, not previously the subject of an examination but relevant to the issue of readiness, will be dealt with in more detail.

It should also be kept in mind that readiness for the fire season will substantially represent the state of readiness for the 4 January 2013, although it is expected that responsible agencies will act to be ready for the immediate risk as well.

What Does Preparedness Mean?

The Tasmania Emergency Management Plan (TEMP) used in January 2013¹ does not provide a clear understanding of what is meant by the word 'preparedness' and the actions required to establish it. Mostly the TEMP uses generalised and descriptive phrases on some aspects of preparedness; it does not provide specific detail on what is expected, or focus on readiness. The most useful description is in the glossary of terms:

*Preparedness: Planned and coordinated measures so safe and effective response and recovery can occur.*²

Another more appropriate description is provided in the Australian Emergency Management Glossary:

*Preparedness: Arrangements to ensure that, should an emergency occur, all those resources and services which are needed to cope with the effects can be efficiently mobilised and deployed... Measures to ensure that, should an emergency occur, communities, resources and services are capable of coping with the effects...*³

Preparedness can be applied across the full spectrum of emergency management: prevention and mitigation, preparation, response and recovery. However, as the January fires are the primary focus of this Inquiry, this report concentrates on bushfire response and recovery operations.

In this part, the word 'preparation' has been taken as including 'planning' and is used accordingly.

However, preparation is not a clearly defined word as it has vague and unending connotations. Frequently 'preparedness' will be used in place of 'preparation' to signify an outcome, as in 'state of preparedness'. A much more useful description is to use the word 'ready' to assess a state of being for emergency management arrangements. In this way it can be asked, how ready were the emergency management arrangements? Taking this approach is preferable because it is the ultimate test of how prepared arrangements were, which is what really matters. The Inquiry has adopted the 'readiness' approach to its assessment.

There are, or should be, a number of dimensions to what a state of readiness means for response and recovery operations, including:

- a suitable concept of operations is established and accepted
- leadership arrangements are established in advance
- key issues are anticipated and policies and specific plans to deal with them are developed
- strategic positioning occurs, including contingencies, so that the best way to deal with situations has been considered and planned for
- a proactive culture is established
- plans are ready to be implemented
- facilities for use in operations are established, set up and ready

1 Tasmanian Emergency Management Plan (TEMP) Issue 6 2009.

2 TEMP, at p. 7.

3 Australian Emergency Management Glossary, Emergency Management Australia, Manual 03, Australian Government.

- systems are established to make operations easier
- equipment that is needed has been acquired and is available
- personnel and other resources required are available to be deployed
- relationships and linkages between people and agencies are established so cooperation occurs readily
- skills, knowledge and personal capabilities are developed in all people required to be involved in emergency operations
- the discipline required to respond quickly and effectively in emergency situations is established
- the leadership capability required to manage emergencies is established
- an emergency management culture is established.

Since 2012, the Western Australia Government has started to produce annual Emergency Preparedness Reports. In this report 16 capabilities are deemed to be fundamental and they are detailed as including:

Sixteen capabilities deemed to be fundamental to the State's prevention, preparation, response and recovery processes are captured. Based on the Capability Assessment for Readiness (CAR) protocol developed in the United States, they include:

- | | |
|---|--|
| 1. <i>Hazard Identification and Risk Assessment</i> | 9. <i>Exercises, Evaluation, Corrective Actions and Post Incident Analysis</i> |
| 2. <i>Hazard Mitigation</i> | 10. <i>Public Information and Community Warnings</i> |
| 3. <i>Laws and Authorities</i> | 11. <i>Operations and Procedures</i> |
| 4. <i>Policy</i> | 12. <i>Logistics and Facilities</i> |
| 5. <i>Finance and Administration</i> | 13. <i>Command, Control and Coordination</i> |
| 6. <i>Resource Management</i> | 14. <i>Volunteering and Community Engagement</i> |
| 7. <i>Public Education</i> | 15. <i>Recovery</i> |
| 8. <i>Training</i> | 16. <i>Support⁴</i> |

Both of these lists can be used for making assessments on the state of readiness of emergency management arrangements, but for the purpose of this Report the Inquiry is not intending to itemise findings against them. These lists may also be of value if it is intended in the future to undertake assessments and report on the state of readiness of the emergency management arrangements. This will be discussed later in this part.

It is appropriate to comment on two observations made to the Inquiry.

⁴ State Emergency Management Committee Western Australia, Emergency Preparedness Report 2012, Government of Western Australia, at p. 5.

First, there are few large emergencies in Tasmania and it is implied this excuses not having arrangements fully ready, as there are not the opportunities to test or practice arrangements. The Inquiry is satisfied the community would not be tolerant or understanding of this excuse if arrangements are not adequate in an emergency. This observation means that there is a risk of complacency and that those responsible for emergency management need to be more diligent in making arrangements which overcome this perceived disadvantage.

Second, where arrangements were not ready to deal with a situation in the January fires, it is not sufficient to argue arrangements were ready in another location. Emergencies don't occur at the convenience of administrators, and judgements should be made on arrangements where and when they are needed. Emergencies come whether people are ready or not.



Image courtesy of Mark Heather

State of Readiness

How ready were the emergency management arrangements for bushfires?

Organisations with a significant role in emergency management, such as the emergency services, need to have a broad, even an organisational-wide capability. An in-depth assessment of some elements of their overall capability is not possible at this time; for example, whether they have a suitable culture, well-developed emergency leadership skills or sufficient resources to operate effectively.

The Tasmanian Auditor-General produced a Special Report in June 2011 to assess the State's preparedness for bushfires.⁵ The difficulty in determining suitable audit criteria was acknowledged and the approach taken was to assess whether responsible entities were keeping up to date with contemporary knowledge and practice. The recommendations of the Council of Australian Government's 2004 report on bushfire mitigation and management was used.

The Auditor-General concluded that, while the results were not outstanding, much had been achieved and the assessment is presented in Table H.1. Comments included:

As a general rule, we observed that the degree of implementation was higher for fire fighting recommendations than for preparation and mitigation. Stronger findings included:

- *Incident control was well covered with solid progress towards achievement of a common system that included effective flow of information and made good use of local knowledge.*
- *Tasmania's 'Prepare, stay and defend or leave early' policy was consistent with the recommendation as revised by the 2009 Victoria Bushfires Royal Commission with further work progressing in the areas of education and training.*
- *Media involvement arrangements with the ABC existed and had been recently tested. Further arrangements with commercial broadcasting organisations were being negotiated.*
- *Key fire management entities were largely satisfied with the standard of training provided under the national framework although there were continuing concerns about its funding.*

...Overall, we found reasonable evidence to conclude that state entities with responsibility for bush fire management were committed to keeping pace with contemporary knowledge and practice.⁶

5 Report of the Auditor-General, Special Report No. 99, Bushfire Management, June 2011.

6 Report of the Auditor-General, at pp. 3 and 4.

Table H.1

Grouped recommendations	Degree of implementation
Bushfire education	50%
Risk management and performance indicators	40%
Research and information	50%
Building in bushfire-prone areas	50%
Bushfire operations	85%

Although a little dated, this report is informative and relevant to this part of the Inquiry's terms of reference.

The final report of the 2009 Victorian Bushfire Royal Commission was handed down in July 2010, and the Inquiry was informed that this Report is now considered the benchmark for contemporary bushfire management. The Victorian Bushfire Royal Commission report is comprehensive and covers the full spectrum of bushfire management. Each of the recommendations made by the Victorian Bushfire Royal Commission has been examined by the State Emergency Management Committee (SEMC) and the Government for their application to Tasmania. Of the 67 recommendations made, 48 were accepted, 17 were supported in principle (requiring some modification to suit Tasmanian circumstances) and two recommendations were not supported.

A summary of the recommendations and their current status can be located as an attachment to the submission by the Department of Premier and Cabinet (DPAC).⁷ Given the discussions in this Report, the nominated status of some of the recommendations should be examined closely, for example recommendation 5 on evacuations.

Both of these reports are very relevant to the preparedness issue, although the 2004 Council of Australian Government Report is now somewhat dated and has been overtaken by the 2009 Victorian Bushfire Royal Commission Report. They provide a framework which can be used to prepare for bushfires and emergencies generally.

The primary concern the Inquiry has is the delay experienced in progressing recommendations through to implementation.

This Report has examined various aspects of emergency management, particularly response and recovery operations, including alerting and warning the community. How ready these aspects were acts as an indicator of the overall state of readiness of these organisations for the fires. Relevant discussions from these parts will be drawn together in this section, along with other appropriate matters and a review of the action taken for the fire risk on 4 January.

⁷ Submission No. 84.

The following matters of substance previously discussed in this Report, reflect on the overall state of readiness for emergency events, such as the fires active on and from 4 January:

1. The *Emergency Management Act 2006* is the starting point for establishing an appropriate state of readiness. In PART J it is recommended that there is an independent review to establish a suitable model for emergency management arrangements in Tasmania. If change is made to the model it should be underpinned in the legislation. Currently the legislation:
 - doesn't specify roles and responsibilities clearly; for example, for the State Controller
 - doesn't establish a suitable framework for properly focussed response and recovery operations (there are further comments on the model below)
 - should provide a better framework for declarations of emergency
 - should provide a more flexible approach to emergency powers.

Similarly, there should be an appropriate reference to Tasmania Police (TASPOL) responsibilities in emergency management in the *Police Service Act 2003*.

2. The emergency management structure is not the most suitable and therefore was not as ready as it could have been; namely:
 - membership of the State Emergency Management Committee (SEMC) is too narrow and should include a broader range of agencies and stakeholders to prepare and be ready for emergencies
 - arrangements are not properly developed and established for overall State level operations
 - TASPOL is primarily structured for emergencies on a regional basis, and there are no suitable structures above and very few structural arrangements below it
 - expectations for a broader operational role for municipal councils across the state are unrealistic and there should be a better alignment with the areas where they can make an effective contribution
 - there are no practical and effective structures and arrangements for the coordination of response operations at a municipal level
 - there is too much focus on committees, which can have a detrimental effect on those with operational response responsibilities
 - there are no state level arrangements to operationalise recovery.
3. Plans were and are generally not ready for the purpose expected of them:
 - the TEMP does not provide a suitable framework from which other plans and arrangements can be developed
 - key policies, such as road closures and evacuations, were not well considered or properly planned for in advance
 - arrangements for engaging with important support stakeholders, such as volunteers, were not established
 - there was no plan to manage the transition from immediate to long-term recovery

- there was no state level public information plan for implementation in the immediate recovery phase
 - emergency plans for the Tasman Peninsula were not ready to be implemented.
4. Coordination is referred to in the TEMP, but there is no detail on how multi-agency coordination might operate, nor are there formalised arrangements for this to occur for response operations. It was not seen as a specific functional requirement and there were instances where a more structured approach to response coordination would have been beneficial; for example, with evacuations, road closures and the Rapid Impact Assessment process.
 5. It is not unreasonable to expect the State Controller would personally take charge of an emergency of this scale and that it would be managed at a state level. However, looking at the model and the lack of appropriate structure in place, it would be difficult to achieve the active and applied leadership required.
 6. There was a purported attempt to appoint the Southern Regional Controller to be 'in charge' of the emergency, but this was not clearly achieved and the Southern Regional Controller concentrated on recovery operations. The concept of operations and understanding among those responsible for emergency operations for this to occur was not established, there was disagreement, and procedures for an effective appointment were not in place.
 7. There were no facilities available or ready for a person appointed to be in charge of the emergency to operate from.
 8. Apart from the State Controller, other senior police (Deputy and Assistant Commissioners) did not have key leadership roles (this comment is position based).
 9. The use of the declaration provisions in the *Police Offences Act 1935* was probably invalid and the emergency powers in the *Emergency Management Act 2006* could have been used. Arrangements were not established for the use of these special powers in emergencies.
 10. Arrangements to enable shared monitoring of radio transmissions and other forms of interoperability between Tasmania Fire Service (TFS) and TASPOL were not established.
 11. The new fire arrangements were not well implemented by TFS; policies were not finalised, there was a high reliance on personal knowledge rather than formal process; and there were other implementation issues. The arrangements were not fully understood or practiced before the fires.
 12. Line-of-control arrangements for TFS operations need to be clarified.
 13. The TFS process for developing operational plans through Incident Management Teams (IMTs) is too slow to be effective in fast-moving fire events.
 14. The IMT did not take over the Forcett fire soon enough and was not ready to manage the fire effectively on 4 January, particularly when it became highly active after midday. There should have been a clear take-over of this fire on 3 January.

15. There was no effective use of the predictive modelling for the Forcett fire, either in proactively developing a fire management strategy or designing community warnings and evacuations. Significant questions arise from this as to the readiness of TFS personnel to accept this form of intelligence and use it effectively.
16. TFS communications arrangements within IMTs, especially for the Forcett fire, were not suitable or sufficiently effective to manage operational radio requirements or accountability in managing emergency calls.
17. The use of the TFS Six Operational Priorities appears to have been well established and they were readily used. There may be issues around how effective they were in practice and whether improvements or changes should be made, but this is not something which could be easily determined in advance of the fires.
18. In suppressing fires at Dunalley and surrounding areas, it is likely TFS was not ready to continue major fire operations during the night.
19. Some policy positions on issues (such as working at night and air support for fire operations) need to be clarified or developed so there is a consistent and appropriate approach.
20. TASPOL did not adopt an adequate proactive approach to operations for the Forcett fire and they were, consequently, not sufficiently ready to act when the situation became urgent.
21. Policies and procedures for road closures were not developed at a state level. There was a TASPOL policy, but there was no pre-planning, uncertainty about closing and opening roads, insufficient flexibility, and community concerns and needs were not well considered in decision making.
22. Policies and procedures for evacuations were not developed at a state level, and personnel were not ready to implement evacuations in an informed, appropriate and consistent way.
23. While appreciating that the scale of the emergency in the Forcett fire was likely to overwhelm most municipal arrangements, the municipal arrangements for the Tasman Peninsula were not sufficiently ready to cope with a major emergency. The Municipal Emergency Management Plan was more of a 'reference' document and plans and arrangements were not ready for implementation. It was said⁸ that specifying roles and responsibilities without the capacity to meet these was 'unrealistic and inappropriate or misleading'. Other councils are likely to be in a similar position.
24. The level of resource availability for emergency services and how that influenced their readiness cannot be determined by the Inquiry.
25. Effective arrangements to register evacuees were not initially available.
26. There was a delay to regional involvement in recovery operations on the Tasman Peninsula.

8 Email received from General Manager of the Tasman Council, 14 August 2013.

27. There were strategic direction and coordination problems in recovery operations on the Forestier and Tasman Peninsulas.
28. There was no effective capability to use social media or manage negative aspects of community use of social media.
29. While there was extensive use of community alerts and warnings, and it is recognised that knowledge on their use is continuing to develop, TFS was not in a position to design alert and warning campaigns to be the most effective.

The above list is extensive, and it may suggest that few arrangements in preparation were undertaken. This conclusion would not do the agencies and organisations justice as there was much that was done in preparation; rather, this list shows that a critical analysis of operations that were under the pressure of a significant emergency reveals a lack of readiness in some areas.

The following paragraphs describe some of the preparedness actions, and comment on the state of readiness.

Tasmania Fire Service (TFS)

TFS, as would be expected of the primary agency for bushfires, was involved in a broad range of matters to help the community, partner agencies and itself be prepared for bushfires in general and the 2012–13 fire season in particular:

For example, a Bushfire Ready Communities project to build local community capability began in 2009 and Community Protection Plans are being developed. Detail on these initiatives is provided in the TFS submission to the Inquiry.⁹ Community education and awareness programs for fire seasons were conducted, public information was made available, and the preparation of personal bushfire plans was encouraged. Further information on projects and initiatives can be found in the TFS submission.

Action was also taken to ensure TFS was operationally ready for the fire season by training and developing its personnel, conducting exercises, managing the Fire Permit Period, arranging aerial fire fighting capability, and making resources available. One particular initiative was to lower the Fire Danger Rating threshold at which total fire bans were declared. From October 2012 to March 2013, there were 1292 bushfires, 39 less than the previous equivalent period despite more unfavourable weather conditions. TFS attributes this reduction to its operational strategies, such as '...the more proactive use of Total Fire Bans, Fire Permit Periods and Permit embargoes combined with successful Public Education and Information programs'.¹⁰

Parks and Wildlife Service (PWS)

PWS was very active in preparation, consistent with the partnership approach which is taken with TFS and Forestry Tasmania in the Interagency Fire Management Protocol.¹¹ PWS had a Fire Action Plan, which was updated annually, with flexible arrangements for its personnel to ensure their availability when the fire risk is highest. Daily fire action plans were prepared and there were detailed arrangements in place.

⁹ Submission No. 60.

¹⁰ Submission No. 60, at para. 4.24.

¹¹ Submission No. 85.

Before the fire season began, PWS conducted Fire Season Preparedness Days, refresher training and workshops for its personnel. An Emergency Management Plan was developed in 2011 for the Freycinet Peninsula, which was also used during the Bicheno and the Freshwater Lagoon fires. These were reportedly particularly useful in helping the evacuation process for threatened areas. Similar procedures for high public visitation areas within reserves with high fire risks are intended for the future.¹²

Forestry Tasmania

As the other partner agency for fire management, Forestry Tasmania also had a number of preparatory arrangements in place. Each of its districts had a Fire Action Plan (which is updated every year), training was provided for personnel likely to be involved in fire fighting activity, contact lists were updated, equipment was checked, and a pre-season review of roles and responsibilities was conducted.¹³

To avoid the risk that previously-burnt log heaps would cause fire, an infra-red scan was conducted to identify any hot spots that have remained alight. In one district, five log heaps were pulled apart and hot spots extinguished in October 2012.

Tasmania Police (TASPOL)

TASPOL provided the Inquiry with information on its preparation for the fire season.¹⁴ This included reference to a number of exercises that had been conducted. For example, Exercise Red Dawn took place in three phases from November 2011 to August 2012. There was another discussion exercise in August 2012 with TFS on a fire scenario, a desk top exercise with Transend on power failure in October 2012, and some District Management Group desk top exercises in November and December 2012.

Exercises are an accepted means of establishing readiness in the field of emergency services, but they do have limitations. They are not full substitutes for actual operations. How broadly and frequently they are conducted is important, to engage and exercise all relevant personnel and facilities in a way that actually prepares them for emergency operations. In addition, the limited number of major emergencies in Tasmania means that preparations need to be more assiduous to ensure emergency arrangements are ready. It does not appear to the Inquiry that the exercises conducted by the agencies — but especially for TASPOL, considering the size of its organisation — have been sufficiently rigorous to achieve this outcome.

Facilities established by TASPOL for the Police Operations Centre and Forward Command Post at Bellerive were not ready for operations on 4 January, as they were not fully set up and did not have the equipment required.¹⁵ This is a surprising situation, particularly as there was some notice of the potential of the fires. In its submission to the Inquiry, TASPOL said the Police Operations Centre had been used to manage the Royal Tour in November 2012, and to exercise its arrangements in a large scale operation. In this context, the lack of readiness of the Police Operations Centre is difficult to understand.

TASPOL uses an Incident Command and Control System (ICCS), which was updated to the

¹² Submission No. 85, at p. 6.

¹³ Submission No. 76.

¹⁴ Submission No. 78, at pp.18 – 21.

¹⁵ January 2013 Tasmanian Bushfires, Internal Debrief Report, Tasmania Police.

ICCS-Plus model in late 2012. ICCS training is included in a number of training courses within TASPOL and is an essential part of promotion to the ranks of sergeant or above. However, in terms of building and maintaining organisational wide capability, this training is limited in that it is not provided to all personnel who may be involved in emergency management operations, nor is there regular refresher training. When the upgraded ICCS system was approved there was some training provided to District Management Groups on the changes introduced by this new system. For the general workforce, the new model has been published on the TASPOL intranet site and operational members are expected to familiarise themselves with it.

The Department of Premier and Cabinet (DPAC)

DPAC is a primary participant in the State Emergency Management Committee (SEMC) and the emergency management arrangements, especially recovery. In its submission to the Inquiry, DPAC set out preparation issues it has an interest in, though these are mixed with prevention issues and initiatives either not complete at the time of the fires or which have been started afterwards.¹⁶

State Emergency Service (SES)

Another agency directly involved in the emergency management arrangements is the SES. It was involved in the January fires, though in a relatively minor way, and it provided a submission to the Inquiry.¹⁷ Of particular interest was the SES role in helping municipal councils with their preparations, which will be discussed later in this section.

Department of Education

A number of other government departments and agencies also provided submissions, and they reflect a range of preparatory actions. For example, the Department of Education has worked closely with the TFS in a Bushfire Ready Schools project. Schools are assessed according to how safe they are for students to remain there during a bushfire threat, over a scale of 1 to 3, with 1 rated the highest. Evacuation plans were developed for schools rated 1 and 2, and the process has begun for schools rated 3. At the start of the 2012–13 fire season, 18 Department of Education schools were rated at either 2 or 3. 'More robust Bushfire Response Plans' are being developed.¹⁸

Municipal Councils

The role of municipal councils in emergencies has been discussed elsewhere, and the concept of their involvement has been questioned. How ready they were to undertake their responsibilities for the fires not only relates to their readiness, but also to what realistic role they should have.

A State Preparedness Project conducted by the SES from 2009 to 2012 included a claim of 'transforming plans into a consistent framework'.¹⁹ It is apparent that a template approach was taken to the council plans, as the ones examined by the Inquiry fit a model. Apart from being able to say that you have a plan, this approach is hardly likely to develop plans in tune with local

¹⁶ Submission No. 84, at pp. 13-23.

¹⁷ Submission No. 63.

¹⁸ Submission No. 49.

¹⁹ Submission No 63, at p. 11.

requirements or install a sense of ownership, and is not consistent with the 2009 Victorian Bushfire Royal Commission recommendation that plans should be tailored to the needs of individual communities.²⁰ There is also a risk that the plans will not be developed in a way that is ready for implementation.

It is likely that there was, and will be, a variable capacity to develop and implement emergency plans, depending to some extent on the resources available to the council:

- the Tasman Council did not activate its emergency plan or establish an emergency coordination centre, and it did not have a specific recovery plan, though a recovery management committee was set up in the week following the fire
- the Municipal Coordinator at the Sorell Council activated its plan and set up an emergency coordination centre, though the centre was not formally opened during the emergency as there was very little support required to be provided by the Council to the emergency agencies. The Council does not have a specific recovery plan as well
- the Central Highlands Council activated its plan as it was requested by the SES to do so, but did not set up an emergency coordination centre. No recovery centre was established and there was also no specific recovery plan
- a similar situation occurred with the Derwent Valley Council, though it was not requested to activate its plan and did not do so
- the Glamorgan Spring Bay Council activated its plan and coordinated activities without opening a centre. Again, there was no specific recovery plan.

A number of councils seemed to manage the various centres they opened and coped with the emergency quite well. However, it could not be said that the emergency management arrangements were ready.

The state of readiness of the agencies and organisations for the fires on 3 and 4 January necessarily involves preparations in an overall sense, and more specific and immediate preparations required to deal with the threats emerging. This specific action, while important in putting the final stages into place, cannot be considered as a substitute for not maintaining an overall state of readiness, nor will it rectify substantial deficiencies in those preparations. The overall state of readiness will substantially determine the outcome of the emergency management arrangements.

Comment and discussion has been provided in other parts of the Report relevant to the state of readiness for response and recovery operations, including specific action in preparation for the 3 and 4 January, and this has been brought together in the previous list in this section.

In terms of the more specific or immediate preparations, the Inquiry is satisfied that agencies and organisations were broadly alerted to and briefed, where appropriate, on the risk on 3 and 4 January, except for the predictive modelling which was undertaken by TFS for the Forcett fire on 4 January. The Inquiry is not certain how far this information was circulated outside TFS, but understands that it was limited.

²⁰ Victorian Bushfire Royal Commission, recommendation no. 3.

The responsible fire agencies – TFS, PWS and Forestry Tasmania — took reasonable specific action for 3 and 4 January to make facilities and resources ready for fire operations, though the information from the predictive modelling was not used by TFS in preparation to the extent that it should have been used. Other agencies mainly alerted and placed on stand-by their arrangements, which generally was suitable action to take.

TASPOL also alerted and placed on stand-by the arrangements it had. However, for the Forcett fire, advice from TFS on the potential of the fire was not used as well as it should have been, possibly because the operations commander spent so much of his time on 4 January attending committee meetings, and a ‘wait and see’ rather than a proactive approach was taken to the fire by senior management.

Effective emergency response and recovery operations need commitment, cooperation and coordination across a wide range of public sector, local government and community agencies and organisations. Maintaining an appropriate state of readiness in this complex environment is a challenge which requires an ongoing, mutually supportive and inclusive approach. The emergency management arrangements need to be designed to achieve this outcome.

Previous comment has been made in PART D, and in the list above, on the narrowness of membership of the SEMC. It is important to link in those agencies and organisations which need to prepare for emergencies, either through membership of appropriate bodies, such as SEMC, or by another process. In the context of maintaining a state of readiness, this arrangement should be examined as part of the review recommended in PART J for the emergency management arrangements.

It is acknowledged that substantial action was taken in preparation for emergencies by the responsible agencies, but the emergency management arrangements were not as ready as they should have been to respond to a major emergency.

Recommendation 75 – that a process be established for the timely implementation of approved recommendations from the 2009 Victorian Bushfires Royal Commission.

Recommendation 76– that an exercise program — to establish and maintain an acceptable state of readiness for agencies and organisations required to be involved in emergency operations — be developed and implemented.

Recommendation 77 – that training and development of personnel to establish a suitable state of readiness, be included in the recommended review by Tasmania Police of its approach to emergency management.

Recommendation 78 – that membership of the State Emergency Management Committee, and other processes to link in appropriate agencies and organisations to emergency management, be included in the recommended review of the emergency management arrangements.

Accountability and Improvement

The examination above of the state of readiness of the emergency arrangements for the bushfires concludes that they were not as ready as they should have been. It appears that this state of affairs is not confined to bushfires, and applies in a more systemic way to the overall readiness of the emergency management arrangements.

It is also apparent to the Inquiry that the pace of reform and change is slow. State of the art arrangements cannot always be expected as improvement is a continuous process, but a sound and solid base should be the minimum requirement, and delays in establishing this should not be acceptable.

Managing substantial change is not an easy process. Recognising the need to change by those in leadership positions is a precondition; and a process that ensures change is effectively implemented must be established. This is not to suggest that organisations are not professionally led and well-intentioned, but that the priority for change and the commitment of resources needs to be established in a way that obtains results.

Further, change requires people to think differently. In substantial change, an appropriate mindset often needs to be developed, as people cannot always see or understand the change required.

Some comments in material provided by TFS and TASPOL to the Inquiry do not engender confidence that change will occur without a process which creates appropriate accountability.

For example:

- the TFS Operational Review of the 2012–13 Tasmanian Bushfires said of the new fire arrangements that although the model was not fully practiced or understood, once it was embedded in the command and control culture, it would 'serve the state well'.²¹ However, as was pointed out in PART E of this Report, the TFS Operational Review failed to mention some fundamental difficulties with the model identified by the Inquiry.
- TASPOL's debrief report, in the section on preparedness, said:

*On balance, the internal debriefs revealed relatively few concerns held by members in respect to the instruments, activities and exercising relied upon to support this agency's bushfire preparations.*²²

To some extent, this last comment may reflect the limitations of debrief processes. Debriefs are a standard and useful process to use following operations to identify areas which worked well or are in need of improvement. They are necessarily limited in that they are normally not a rigorous objective critical process, but rely on people describing or reviewing matters relating to their own or a colleague's performance.

The Inquiry does not intend to make too much of these comments; they are only used to reinforce the difficulties in managing change.

21 Operational Review, Tasmanian Bushfires 2012/13, Tasmania Fire Service, at p. 24.

22 Tasmania Police, January 2013 Tasmanian Bushfires, Internal Debrief Report, at p. 17.

An accountability process would involve:

- identifying responsibilities
- setting priorities, establishing targets and approving work plans
- ensuring resources are available to achieve desired outcomes
- monitoring and measuring performance against targets.

An accountability improvement process can be established in line with the model suggested in PART J, for consideration in the recommended review of the emergency management arrangements. It is suggested in that model that a body — such as a Security and Emergency Council — is established. Accountability reporting to this Council would be a suitable mechanism.

The conclusion of this Report recommends that a mechanism be established to monitor and report on implementation of approved recommendations in this Report. This mechanism can also complement the process established for accountability, reporting to the Security and Emergencies Council for so long as necessary to achieve a satisfactory outcome on those approved recommendations.

It is also envisaged that there is an ongoing process of providing State of Readiness reports to the Security and Emergency Council. The Western Australia Government, as previously mentioned, has initiated annual State of Readiness reports. A similar process is recommended in this Report for agencies and this may be incorporated into an overall report. Individual agencies should provide a report as this has a better alignment with the accountability chief officers should have for the readiness of their agencies. The State Controller or chair of the SEMC could be responsible for providing an overall State of Readiness report.

Recommendation 79 – that an accountability process be established for managing improvement in the emergency management arrangements, including annual State of Readiness Reports by relevant departments and agencies and on the overall emergency management arrangements.



Photo courtesy of Bernard Plumpton

PART I – MANAGING FIRE RISK

The Inquiry is required to examine and report on the strategies and plans related to managing bushfire risk in Tasmania in place before the fires on 4 January.

Identifying and managing risk is, or should be, an integral part of all emergency management arrangements for bushfires. For example, risk treatment options should be included in strategies and plans for preparation, response and recovery. These dimensions of risk treatment, in the context of the 4 January fires, have been examined in other parts of the Report and will not be re-examined. However, it should be noted that risk management models can be applied to those areas.

This part focusses on treatment options not included in emergency management operations referred to in the previous paragraph. They are still part of the State emergency management arrangements.

Factors Contributing to the Risk of Bushfires

The history of bushfire in Tasmania provided in PART B shows there is an ever-present bushfire risk. Although data recording practices may have changed over the years, the chronology tends to indicate an increasing risk of bushfire events.

The Inquiry does not intend to provide a comprehensive risk analysis for bushfires. Rather, it will indicate some of the primary contributing factors for the purpose of identifying areas where intervention is a reasonable approach to risk management. In examining these contributing factors, the comments in PART D on what influences fire behaviour should also be taken into account.

Bushfires and their intensity and severity are caused by a number of factors. For a fire to ignite and burn, it requires a fuel, oxygen and an ignition source. The intensity of a bushfire is in turn, dependent on how much and what type of fuel is available, prevailing weather conditions and the topography.

Fuel

The quantity of fuel and its arrangement contributes to bushfire intensity. If fuels are compacted or scarce, a fire will be less intense. Conversely, where fuel is arranged close together and is readily available to a fire, it will tend to be more intense. Ground fuels will be consumed first, allowing flames and heat to extend vertically into shrubs and undergrowth, providing a ladder into taller fuels above. In the right conditions, these fires move quickly into the crown of trees.

Moisture content is also important and rainfall contributes to fuel moisture content. Many large bushfires follow a serious long-term drought or rainfall deficit.

Weather

Wind is the most important factor in fire behaviour. Even on cooler or moist days if fuel arrangements suit, a bushfire can start and be pushed through the fuels with the fire pre-heating and removing moisture as it burns. Wind assists the spread of a fire.

Spotting of a fire is also promoted by wind. This occurs when burning bark, leaves and other material is picked up in strong wind currents and pushed downwind of the fire. It is known to have occurred up to 30 kilometres ahead of a main fire front. A fire front and new fires can rapidly occur by the spotting phenomena. A fire is generally controllable even when fuel is dry and in large quantities but the wind is less than 15kph. As wind increases so too does fire intensity. Wind will also influence the direction and size of the fire front.

Large bushfires can also create their own weather patterns, and completely change weather conditions in surrounding areas. Pyro cumulous clouds can form creating isolated rain and thunderstorms in bushfire affected areas. As bushfires become larger, they require more air carrying oxygen and so create their own wind patterns to feed the fire.

Topography

Slope on land will dramatically affect bushfire behaviour. As bushfires burn the radiant heat and convection currents pre-heats fuel in front of the fire. With a 10 degree slope a bushfire will double its speed; with a 20 degree slope, a fire will advance up the slope four times faster than without it. Gullies can channel the direction of a fire, and when conditions are right even wet gullies can burn rapidly.

The aspect of land can also play an important part in fire behaviour, due to the exposure of the fuel to the sun. North and eastern facing topography is typically much drier and fuel burns more readily. Where there has been low rainfall or drought conditions, westerly aspects can promote rapid bushfire behaviour.

Source of Ignition

The majority of bushfire ignitions are by human action. Most are accidental, but negligence is included in this classification of the cause of fires. These fires may be caused by the use of equipment or machinery, or lit with good intentions and escape, or are not properly extinguished. The good intentions can be significantly outweighed by the resulting damage. Other deliberately-lit fires are arson. This is a prevalent source of bushfires which often occurs in populated areas close to the urban/bushland interface.

Naturally occurring fires are caused through lightning activity and these are frequently difficult to detect in the early stages, particularly in remote areas.

Climate Change

The cause of climate change is the subject of much debate and opinion. The Inquiry does not need to enter this debate or proffer an opinion, only recognise that climate change is generally accepted as occurring, whatever the cause, and to acknowledge it as a factor in determining bushfire risk.

For this purpose, it is sufficient to refer to the Climate Commission and its points:

- extreme weather events are not unusual in Australia and are a natural feature of the climate system
- all extreme weather events are now influenced by climate change
- compared to 50 years ago, the climate system contains significantly more heat and all extreme weather events are happening in this more energetic climate
- the duration and frequency of heatwaves in Australia have increased, and the hottest days during a heatwave have become hotter
- it is virtually certain that extreme hot weather will continue to become even more frequent and severe
- since the mid-1990s, the southeast of Australia has become drier, especially in the cooler months of the year
- the projections for the future indicate a significant increase in dangerous fire weather for southeast Australia.¹

Bushfire risk is not the only natural outcome of climate change; for example, there is a higher risk of flooding events.

The Climate Commission comments that the consequences of climate change are dependent on the exposure, vulnerability and adaptive capacity of people, infrastructure and ecosystems, where:

- exposure is the placement of people and property where they could be adversely affected
- vulnerability refers to the propensity to suffer negative impacts from an extreme event
- adaptive capacity is the ability to adjust to actual or expected events.²

Consistent with this prognosis, the Tasmanian Government developed the issues paper 'Adapting to Climate Change in Tasmania',³ and circulated it for community feedback in October 2012. It is therefore very timely to include bushfire risk in the Government's consideration of the climate change issue.

1 'The Critical Decade: Extreme Weather', The Climate Commission, Department of Primary Industry, Innovation, Climate Change, Science, Research and Tertiary Education, Commonwealth of Australia.

2 'The Critical Decade: Extreme Weather', at p. 11.

3 'Adapting to Climate Change in Tasmania', Issues Paper, Tasmanian Government, 2012.

The Issues Paper identifies four key roles for the Government in adapting to climate change:

- *providing sound public information at the regional and local level*
- *taking climate change risks into account in public policy, planning and regulation*
- *managing climate change risks and impacts to State-owned and managed infrastructure, assets and services*
- *helping vulnerable communities build climate resilience and adaptive capacity.*⁴

One of the six priority areas identified for community adaptation is natural disasters. In this section, it is recognised that there is likely to be a climate change impact on natural emergency related events. The issues paper comment is that:

*There are limits to the Government's ability to fund emergency management resources, so an appropriate balance of measures will need to be considered to manage the increased pressures on the emergency management system. For example, in some instances preventative land use planning policies may be more effective in managing the risks posed by natural hazards to people and property than emergency response actions.*⁵

Relevant risk management areas will be discussed below, and particular recommendations for change to the emergency management arrangements will be made in PART J.

Living in Fire Risk Areas

Regardless of climate change, but certainly compounded by it, is the current desire by many people to live in bushfire risk areas. The contribution of demographic movement to the risk of bushfire in Tasmania requires careful analysis. For example, there are likely to be a number of population movement patterns occurring simultaneously, such as the tendency for fewer young people to be engaged in agriculture, urbanisation, and residing in the urban/rural interface.

The extent to which there is a trend to live in areas of bushfire risk is relevant to risk management. It is argued that the single variable explaining most of the vulnerability of a home to bushfire is the distance from the bush. Studies in this field indicate that '85% or more of the houses lost in Australia since the 1967 Hobart fires were located within 100 metres of the bush'⁶. There are estimated to be 34000 or 11% of addresses in Tasmania which lie within 100 metres of the bush.⁷

Another perspective on the historical bushfire risk is provided from a database maintained at Macquarie University on the risk of natural hazards.⁸ Records on fire go back to 1926 and show 14000 home losses throughout Australia. Tasmania has recorded 23 events since then or 3% of fires, and 1646 or 12% of the home losses. Clearly, the data on home losses will be influenced by the scale of the events and, like any small data figures, care should be taken on conclusions drawn. The figures do however reinforce the fact that Tasmania has a significant

4 Adapting to Climate Change in Tasmania, at p. 6.

5 Adapting to Climate Change in Tasmania, at p. 28.

6 'A history of vulnerability: putting Tasmania's bushfires in perspective', by De Oliveira, Felipe, McAneney, John, and Chen, Keping, an article in The Conversation, 11 January 2013, at p. 2.

7 'A history of vulnerability: putting Tasmania's bushfires in perspective', at p. 2.

8 'A history of vulnerability: putting Tasmania's bushfires in perspective', at p. 3.

historical fire risk, and data also shows that the majority of the risk is in the Hobart region. The implications of demographic change in rural areas, apart from the risk of people residing in bushfire risk areas, are complex and require detailed analysis. Some of the implications are included in the submission by the Tasmania Farmers and Graziers Association, including lifestyle risks associated with 'tree and sea change life stylers' and loss of forest firefighting equipment and skills.⁹

Recommendation 80 – that the Government take into account demographic change in its assessment of the consequences of climate change on emergency events.



Image courtesy of Andrew Skelly

⁹ Submission No. 75.

Risk Assessment, Responsibilities and Planning

There are a number of agencies and organisations with responsibilities relating to bushfire risk. Risk assessment models also provide outcomes at varying levels, ranging from high level strategic assessments to those at a local level for a specific risk.

Usually risk assessment models determine the level of risk by considering the likelihood of an event occurring and the significance of the consequences should it occur. Once risks are rated through this process, options for treating the risk — to prevent or mitigate it — are identified and considered. A number of major inquiries into bushfires have detailed commentary on the process of assessing risk, such as the 2004 Council of Australian Governments National Inquiry on Bushfire Mitigation and Management Report (COAG Report), and that form of information is not replicated in this Report.

However, it is necessary to comment on the focus of treatment options. It is usual to describe this in the emergency management spectrum, in terms of prevention or prevention and mitigation, as is the case in Issue 6 of the Tasmanian Emergency Management Plan (TEMP).

The COAG Report suggested a 5R framework replacing prevention in the emergency management model with risk modification.

There was concern that the use of the word 'prevention' may create a perception that fires can and should always be prevented, reinforcing an unachievable expectation.¹⁰ This Inquiry prefers the retention of the emphasis on 'prevention and mitigation' as many fires can be prevented and it should not be expected that all fires are inevitable.

The COAG Report made a number of important points for consideration in treatment options:

- the way the risk management process is conducted and applied is critical to the acceptance of decisions by those with an interest in managing fire in the landscape
- the context of a landscape needs to be established and the various factors across a landscape understood
- community preparedness needs to be commensurate with the potential severity of a fire
- landscapes are highly complex matrices of different tenures, assets and infrastructure
- bushfires do not recognise boundaries, so that risk treatment is a whole-of-landscape process not confined to a single agency or tenure
- there is a changing nature of the mix of land uses and settlement patterns.¹¹

State Emergency Management Committee (SEMC) responsibilities include preventing and mitigating emergencies. The statutory functions of the SEMC include 'to institute and coordinate, and to support ... emergency management', which is defined to mean 'the planning, organisation, coordination and implementation of measures that are necessary or desirable to prevent, mitigate ... an emergency'.¹²

¹⁰ Council of Australian Governments National Inquiry on Bushfire Mitigation and Management Report 2004, at pp. 52 and 53.

¹¹ COAG Report, at pp. 47 – 51.

¹² Emergency Management Act 2006, at ss. 3 and 9.

Issue 6¹³ of the TEMP contains a section on prevention and mitigation, which is mainly descriptive. However, there is a small part on prevention and mitigation strategies and these are set at a broad level. More detailed roles and responsibilities are outlined in section 2, where these are allocated to advisory agencies, management authorities and support agencies.

A management authority is responsible for prevention and mitigation of nominated hazards. In the case of bushfires, depending on land tenure, this is divided between the Tasmania Fire Service (TFS), Parks and Wildlife Service (PWS) and Forestry Tasmania.¹⁴

However, there is very little in the TEMP to specify action and accountability.

The Security and Emergency Management Advisory Group (SEMAG) has a role in providing strategic policy advice to the SEMC, which presumably includes risk management.¹⁵

There is no state risk management plan or an advisory forum on risk management at a state level. The Inquiry was told of a project to develop a Strategic Directions Framework for the SEMC, and that this would include strategic directions for 'Understanding and Mitigating Risk' and 'Building Resilience'. It remains to be seen whether this project will alter the status quo significantly.

The 2012 Tasmanian State Natural Disaster Risk Assessment (TSNDRA) report has just been completed to complement a number of national initiatives, including the National Emergency Risk Assessment Guidelines 2010, and the National Strategy for Disaster Resilience 2011. The methodology used was consistent with national standards.

The TSNDRA report provides a strategic, state-level risk assessment for the purpose of providing key emergency management decision-makers with information to assist in determining state risk mitigation priorities.¹⁶ A detailed risk analysis was seen as not feasible for this report because of lack of data, unpredictability of disasters, and the overall context of the study.¹⁷ For the purposes of the assessment, bushfire was taken to mean a vegetation fire.

Tasmania's top priority hazards were determined as bushfire, flooding and storms/severe weather.¹⁸ The spatial spread and variability of the bushfire risk is illustrated by the map at figure I.1.¹⁹

13 The operative plan on 4 January 2013.

14 Tasmanian Emergency Management Plan Issue 6 2009, at pp. 26 – 29.

15 The areas of policy advice are not specified in Issue 6 of the TEMP, but in Issue 7.1 the advisory function includes reducing risk. See para. 2.24 in both plans.

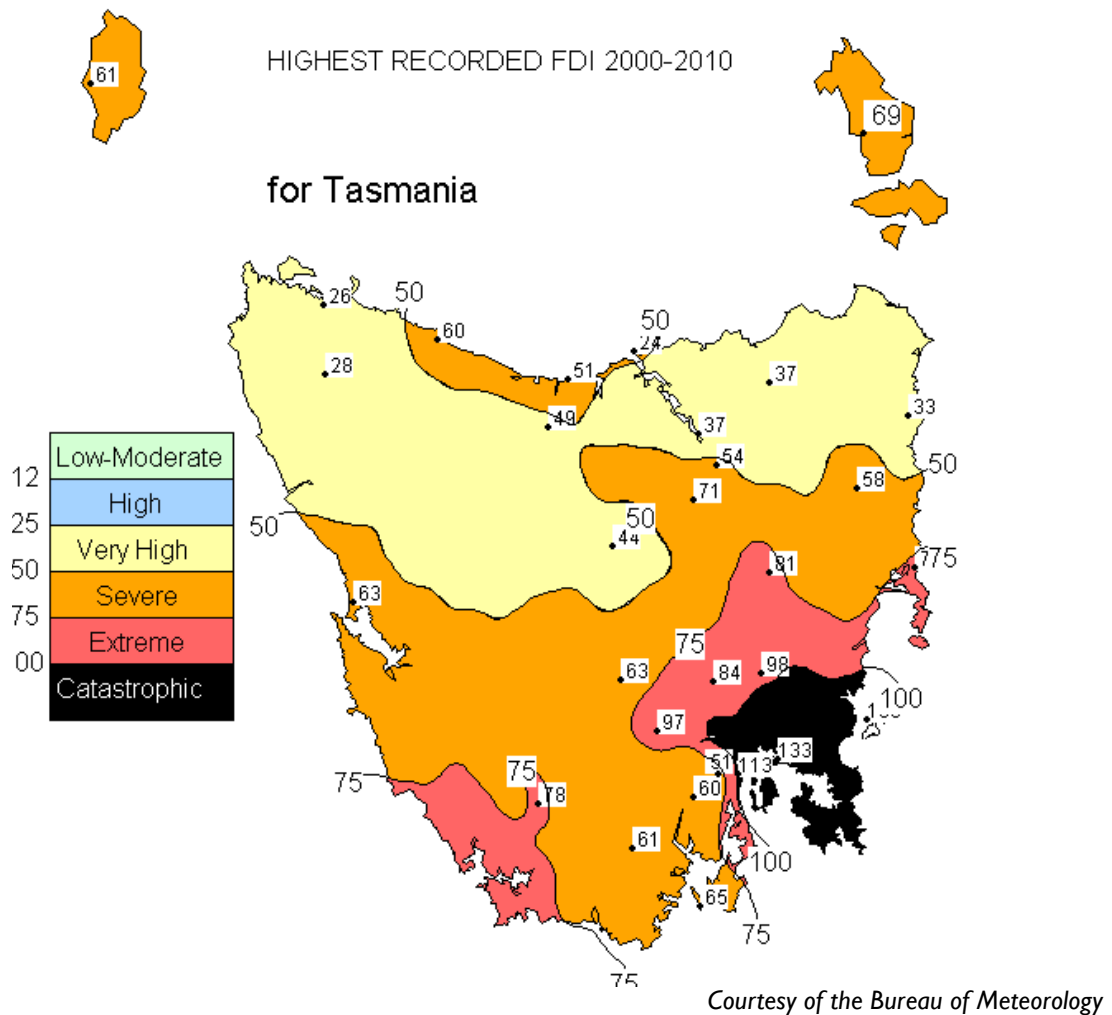
16 2012 Tasmanian State Natural Disaster Risk Assessment report, at p. 3.

17 2012 Tasmanian State Natural Disaster Risk Assessment report, at p. 7.

18 2012 Tasmanian State Natural Disaster Risk Assessment report, at p. 11.

19 2012 Tasmanian State Natural Disaster Risk Assessment report, at p. 25.

Figure I.1



Interestingly, in the context of this Inquiry, a comment is made that:

Overall, existing controls in respect to response and recovery were considered effective.²⁰

20 2012 Tasmanian State Natural Disaster Risk Assessment report, at p. 27.

Bushfire risk treatment options for consideration are outlined in Table I.2.²¹

Table I.2

Proposed Option	Intended Effect
Promote a greater focus on bushfire prevention and preparedness programs	-Reduces likelihood -Reduces Impacts
Develop and strengthen the strategic state-wide approach to bushfire fuel reduction activities	-Reduces likelihood
Evaluate the impact of recently implemented bushfire risk mitigation measures on the State bushfire risk assessment	-Increases confidence -Review and update fire
Education programs to ensure bushfire risk is communicated from school age onwards	-Reduces likelihood -Reduces impacts
Reinforce individual responsibility in fire risk messages	-Reduces impacts
Undertake further research and consideration of 'vulnerability' to improve the management of communities vulnerable to bushfire risks	-Reduces impact
Conduct state-wide catastrophic bushfire scenario exercise for the purpose of further assessing existing controls and capabilities and informing risk reduction priorities	-Increases confidence
Review state-wide approach to identifying 'vulnerable' critical infrastructure and prioritising the defence of assets at risk during a bushfire event	-Reduces impacts

Some strategic guidance is also provided by the key findings and common issues across hazards in the report, which are indicated as:

- the need for a consistent approach to community resilience assessment
- increased vulnerability leads to greater likelihood of natural disaster impacts
- community expectations of emergency management authorities are unrealistic
- maintaining focus on prevention in awareness and education programs
- capturing the extent and impact of natural hazard disasters
- emergency management awareness of critical infrastructure priorities.²²

The TSNDRA report and its contents will have little meaning if it is not translated into practical action.

A more detailed approach to planning is provided by the Bushfire Risk Assessment Model (BRAM) developed and used by PWS to create Regional Strategic Fire Management Plans. There are four components to the BRAM, and it has the advantage of incorporating fire behaviour and values at risk, such as environmental and conservation interests, agriculture and forest industry, and infrastructure. The model takes a landscape approach and the input factors are shown in the following two figures.

²¹ 2012 Tasmanian State Natural Disaster Risk Assessment report, at p. 30

²² 2012 Tasmanian State Natural Disaster Risk Assessment report, at p. 22.

Figure I.3 – Likelihood Component²³

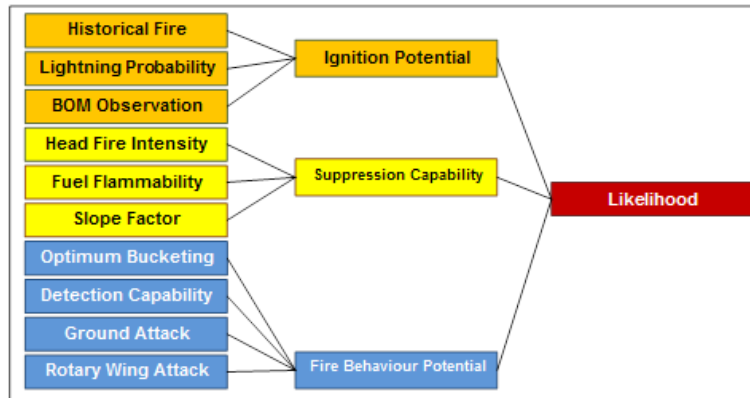
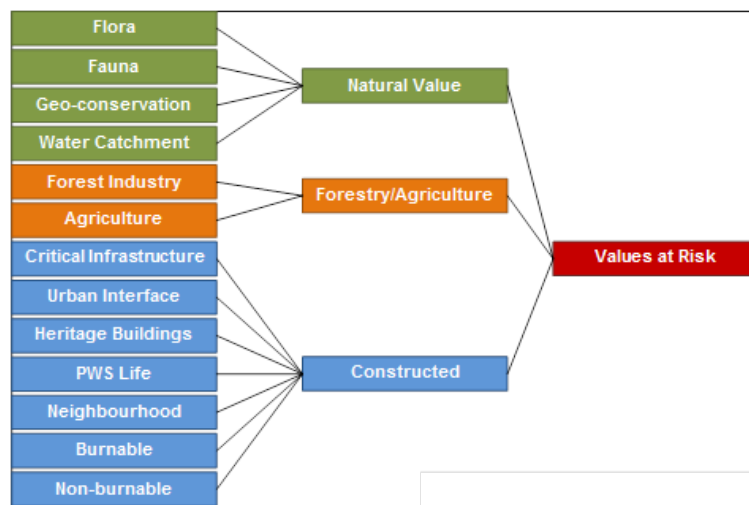


Figure I.4 – Consequence Grid (Values at Risk)²⁴

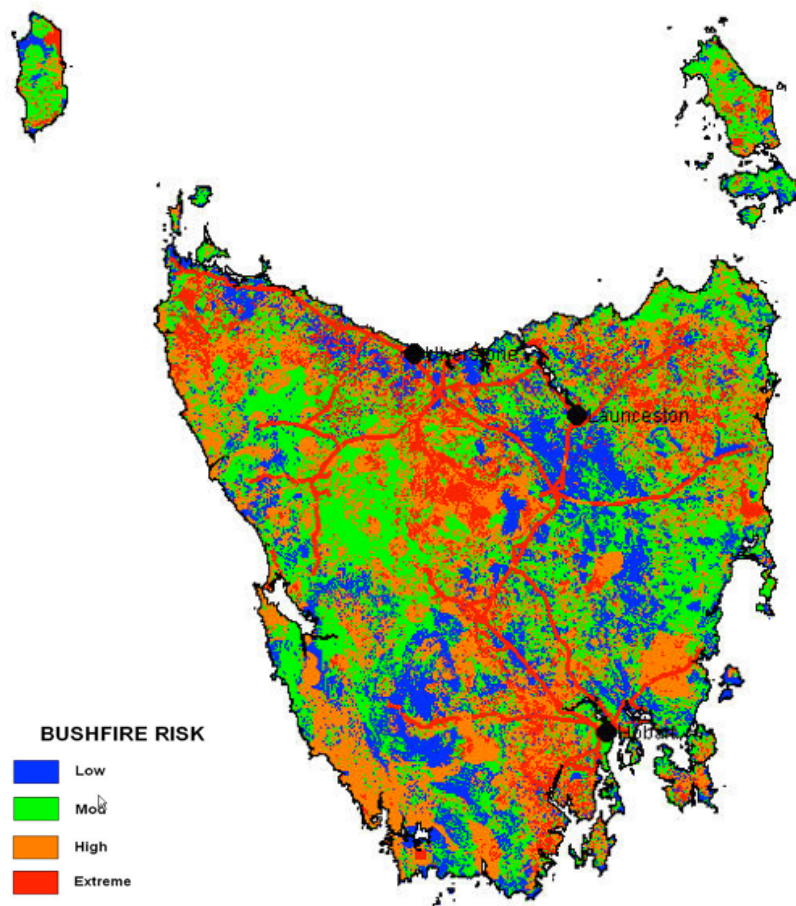


23 Bushfire Risk Assessment Model, Parks & Wildlife Service, p. 3.

24 Bushfire Risk Assessment Model, Parks & Wildlife Service, p. 4.

A detailed illustration of state bushfire risk is shown at figure I.5.²⁵

Figure I.5



Effective risk treatment for bushfires ideally should be location specific and capable of providing more real-time assessments as the risk changes over time.

In the Special Report No. 99 on Bushfire Management, the Auditor-General examined the approach to risk management and the use of risk assessment tools by agencies and organisations with bushfire management responsibilities. There were two related important findings in the report:

- TFS, PWS, Forestry Tasmania, power supply organisations, and a number of municipal councils were examined. While they had addressed bushfire risk in some way, the approaches varied widely
- the BRAM was not universally accepted or used.²⁶

It was noted that fire-related responsibilities were not core business for the agencies and organisations examined for the first point above (except for TFS) and that there was a need for an overarching body to focus on all aspects of fire management and mitigation. It was recommended that the State Fire Management Council (SFMC) should be funded to enable it to take a greater coordination role for bushfire risk and mitigation. The role of the SFMC will be discussed below.

²⁵ Bushfire Risk Assessment Model, Parks & Wildlife Service, cover page.

²⁶ Report of the Auditor-General, Special Report No. 99, Bushfire Management, June 2011, at pp. 36 – 41.

It was recommended that the SFMC should support the further development of the BRAM, so it becomes the central information source for all agencies with responsibility for fire management and mitigation. The development of the BRAM is being supported by TFS, and the Inquiry understands it is being undertaken in a collaborative way with all fire authorities.

A Risk Mitigation Strategy project is being managed by the State Emergency Service, which follows on from the TSNDRA, and it seeks feedback on the proposed risk treatment options outlined in that report. This process has not been finalised and discussed by the SEMC. However, these treatment options are at a high level and they would need a more detailed and practical application to be effective. It is not apparent that this is occurring and it is surprising that there are not more detailed strategies and plans on risk management for bushfires already in place at a state level. This may be a consequence of the structure of the TEMP, in simply nominating agencies to be responsible for specified hazards.

The State Fire Commission is responsible for the TFS and its functions include developing effective fire prevention measures throughout the State, and developing and promulgating a State Fire Protection Plan.²⁷ Presumably this includes risk mitigation.

At the time of the 4 January fires, Version 1 of the State Fire Commission's State Fire Protection Plan was in place, having been issued in 2010. On bushfire risk, the prevention strategies were described as:

Fire Permit System. Fire permits assist in preventing fires through the imposition of conditions that enable fires to be lit safely. The Fire Permit Period is generally declared based on local government areas when significant potential exists for damaging fires to occur.

Total Fire Ban. A Total Fire Ban is the ultimate community warning of very high to extreme bushfire danger, prohibiting the use of outdoor fires.

Fire Weather Warnings. The Bureau of Meteorology issues Fire Weather Warnings when forecast weather parameters exceed prescribed thresholds creating very high fire danger to discourage inappropriate fire lighting activity. These notifications are disseminated at Very High FDR 38 and above.

Fire Management Plans. Assist land managers to develop and implement Fire Management Plans. Fire Management Area Committees are required to prepare Fire Protection Plans.

This is a very limited approach to risk mitigation. The strategies identified are all important and would have an impact, but there is much more that could have been done. It is likely that there were other treatment measures in place. An amended plan was approved by the Commission after the 4 January fires. The current State Fire Protection Plan, though it combines bushfires with other fire risk management, now contains specific detail on treatment measures. There is no accountability framework in the plan, but it is more likely to be effective on risk management, if the measures are properly implemented.

²⁷ Fire Service Act 1979, at s. 8.

The SFMC also has an important role in bushfire risk management. Statutory functions for the State Fire Management Council include developing a state vegetation management policy to be used as a basis for all fire management planning and to advise the Minister on matters relating to the prevention and mitigation of vegetation fires.²⁸

There have been substantial changes for the SFMC over the past 12 months.

Funding has been obtained to provide better policy development, project management and administrative support for the SFMC, which will support a new role with Fire Management Area Committees and a fuel reduction program. The SFMC is now in a better position to be able to effectively perform its intended role.

The SFMC is essentially an advisory body; providing advice to the Minister for Police and Emergency Management and influencing those with direct responsibility to take action. It is a challenging role to bring together the diverse interests in bushfire management and gain cooperative and collective action.

An important part of the process is the responsibility to prepare suitable policy and a State Vegetation Fire Management Policy 2012 has been developed. The aim is to provide a standard and consistent framework for the management of vegetation across all land tenures and vegetation types. It identifies three key action areas:

- management of fire in vegetation
- community awareness and engagement
- building the knowledge base.²⁹

The State Vegetation Fire Management Policy recognises the need to balance the diverse interests and to apply the principles approved in the 2004 COAG Report. Relevant stakeholder groups are 'encouraged' to take actions set out in the policy. The content of the State Vegetation Fire Management Policy appears to be suitable for its purpose.

There is also a National Bushfire Management Policy Statement for Forests and Rangelands, which was endorsed by the COAG in 2012, though there is some doubt as to its final status. Nonetheless, the Government of Tasmania has apparently supported the plan and the SFMC expects to use it in developing a Strategic Fuel Management Plan.³⁰

The SFMC has more direct influence over the Fire Management Area Committees as they are appointed by the Council to specified areas with responsibilities to:

- coordinate fire management activities including community education and information, and fuel management
- identify and assess community bushfire risks, and prioritise strategic work in response to those risks
- submit an annual fire protection plan for its area, consistent with the plans, policies and instructions from the SFMC.³¹

28 Fire Service Act 1979 at s. 15.

29 Submission No. 72.

30 Submission No. 72.

31 Fire Service Act 1979 at s. 20.

Recent changes brought Fire Management Area Committees under the control of the SFMC. The number of Committees is being reduced and the areas are being aligned with municipal boundaries. It is intended to include people on the Committees who have ownership of the issues and are committed to obtaining effective outcomes. The BRAM will be used along with local knowledge to identify bushfire risk.

The principal purpose of the Fire Management Area Committees is to prepare a fire protection plan for the area they are responsible for, to identify and prioritise bushfire vegetation risks, and prioritise strategic work to mitigate those risks.³² Mitigation plans will be developed in close consultation with TFS and local councils. The Fire Management Area Committees are also expected to provide a vital link with local brigades. As indicated above, the fuel reduction aspect of these plans will be dealt with in a separate section.

Areas in the plans are expected to include a number of people with direct interests and responsibilities in the areas; for example, representatives from PWS and Forestry Tasmania. In addition, it is intended to take a strategic approach which necessarily means that priority risks and mitigation measures will not be confined by land boundaries. It is expected that land management agencies, such as PWS, will still be responsible for developing fire management plans, but these plans will be taken into account by the Fire Management Area Committees in developing their strategic fire protection plans. In this way, it is planned that the approach will be both comprehensive and strategic.

The fire protection plans will not be confined to fuel reduction and will include other matters related to bushfire risk, including fire trails, access points and water points. Standards for these have been discussed at the SFMC and it is expected that where they are of strategic importance they will be maintained and kept open.

Effective risk mitigation plans should involve dealing with a number of issues relating to the risk and the SFMC, SEMC and other responsible organisations should consider a broad range of these issues. Submissions to the Inquiry contain suggestions which are relevant to this process and they should be taken into account. For example, the Tasmanian Farmers and Graziers Association raised the following matters as needing to be included in any future bushfire management system:

- adequate resourcing for volunteer bushfire brigades
- systematic and comprehensive hazard reduction
- hazard management and access provisions in rural settlements
- establishing a strategic network of firebreaks and access roads
- ongoing review of operational firefighting procedures.³³

It can be expected that there will be legislative issues to be overcome in making these plans effective, especially in fuel reduction.

A question which arises is whether the cooperative model will work in bringing together the diverse interests into collective action.

³² Submission No. 72.

³³ Submission No. 75.

The Tasmanian Farmers and Graziers Association argued that there needs to be a review of the way bushfire policy is set in the state, and a Tasmania Bushfire Policy Council should be established:

...crucial elements of the state's approach to managing bushfire risk are left too much to negotiation between different organisations and stakeholders. One outcome of this situation is, for example, the patently inadequate level of hazard reduction burning in the state. This situation is largely the result of the lack of an unambiguous priority being attached to hazard reduction.

The problem has essentially arisen because there is no overarching policy, relating to bushfire risk management which stipulates what the necessary trade-offs between policy domains are to be, set at a level in government which has the authority to insist that trade-offs are adhered to and which therefore can provide the certainty that effective bushfire management needs – ahead of time.



Image courtesy of Warren Frey

The TGFA recommends that the Tasmanian government establish a body to be known as the Tasmanian Bushfire Policy Council ... to report directly to the Tasmanian Premier and with the responsibility for proposing policy which provides for the effective management of Tasmania's bushfire threat with an unambiguous statement of primacy for that policy as necessary, over other policy domains.³⁴

The Manager of the SFMC suggested to the Inquiry that the Fire Management Area Committee fire protection plans should be included in the TEMP, as a way supporting the plans with the authority of the *Emergency Management Act 2006*. This is potentially an alternative to solving the problem envisaged by the Tasmanian Farmers and Graziers Association. Another option, more in line with the Tasmanian Farmers and Graziers Association proposal, is to integrate it with the Security and Emergency Council suggested in PART J of this Report.

The SFMC has received funding to support it and there has been legislative change to the way Fire Management Area Committees operate. It remains to be seen whether the cooperative approach will work. However, the history of inaction on bushfire risk management suggests, and the Inquiry shares the concerns about effective implementation of the SFMC approach, particularly with fuel reduction. This matter should be further considered by the Government.

Land holders also have an interest in bushfire risk mitigation. Many of these are in the private sector and it is not proposed to generally examine those responsibilities in this area. However, one aspect that has been mentioned to the Inquiry, which may be relevant more generally, is that private land holders should be responsible for fires that start on and escape from their land. This is particularly relevant to fuel reduction burning on private land and it was suggested to the Inquiry that models in other countries, such as the requirement to have insurance against the cost of escape,³⁵ should be considered. It may be appropriate for the SFMC to examine this area and provide advice to the Minister.

PWS, Forestry Tasmania and Norske Skog are substantial land holders (the first two in the public sector), and comment will be made on their approach to risk mitigation because of their significance in this field. Detail on the treatable land will be provided in the section on fuel reduction.

Parks and Wildlife Service (PWS)

PWS is responsible for most of the State's public land, which now amounts to 2.5 million hectares following the recent Tasmania Forest Agreement and a transfer from Forestry Tasmania of approximately 730 000 hectares. There is a structured approach to planning with a strategic plan at state and regional levels and they cascade in a consistent way down to individual field centres. The plans operate across the emergency management spectrum, including response and recovery, and in that sense provide a comprehensive approach to risk mitigation. Fuel reduction is the primary approach to risk prevention and mitigation relevant to this part of the report.

With the significant addition to land under the management of PWS, there will be a substantial increase in risk if sufficient resources are not provided to manage this new responsibility.

34 Submission No. 75.

35 For example, New Zealand.

Forestry Tasmania

Forestry Tasmania also has a substantial public land responsibility. There was no reference in Forestry Tasmania's submission to the Inquiry of a planned approach to risk mitigation, apart from the Fire Action Plans each Forestry Tasmania District uses, and other arrangements, to prepare for and respond to fires. However, Forestry Tasmania does have a fuel reduction program.

Forestry Tasmania is concerned about the reduction in machinery and skilled operators available for bushfire operations, due to the collapse of Gunns Limited and contraction of the forest industries. The Inquiry was informed that the availability of bulldozers and other heavy machinery has been reduced by one third and the number of skilled operators has declined even further.³⁶ Forestry Tasmania recommends that the Government should note this reduction in resources and take action to ensure suitable machinery and experienced operators remain available. There are also concerns about the maintenance of access roads and infrastructure for fire management.

Norske Skog

Norske Skog is a private sector forestry company with substantial commercial timber interests. It maintains a fire management capability, and equipment and trained and skilled personnel are available to respond to fire threats on its own land and to work in partnership with TFS and PWS on joint fire operations. For example, Norske Skog personnel and equipment were significantly involved in the Lake Repulse fire operations.

Municipal Councils

Local councils have an interest in and should be more engaged in preventing and mitigating bushfire risk. Presently they are involved through the Fire Management Area Committees and it is expected they will be stakeholders in these committees. It appears that councils are mainly involved in managing risks in a reactive way by responding to fire hazards which are regarded as a nuisance. Councils can issue abatement notices through s. 200 of the *Local Government Act 1999*.

Tasmania Fire Service (TFS)

TFS also has authority to deal with fire hazards. S. 49 of the *Fires Service Act 1979* empowers an authorised officer to require a land holder to rectify a fire risk where any hedge, vegetation, rubbish or similar matter is in a condition which poses a fire danger. The Inquiry was informed that this provision is most often used to support a local council with a fire hazard. It too, is used in a reactive way, though it has potential to be able to be used proactively.

In terms of mitigating bushfire risk, a strategic approach as envisaged by the SFMC is desirable and is supported, but the Inquiry is satisfied that a more structured and systemic approach to dealing with fire hazards is required. This would ensure a more comprehensive approach to the risk, and deal with hazards that may present as a source of bushfire or aggravate the risk once a fire is started. Such an approach would engage municipal councils in a practical and effective way of protecting their assets and their local community.

The Tasmanian Farmers and Graziers Association submitted that there should be strict obligations on land owners to manage fuel on their land and maintain access roads and tracks on their property to allow ready access by brigades.³⁷ This supports a better approach

³⁶ Submission No. 76.

³⁷ Submission No. 75.

to hazard management and the matters raised by the Tasmanian Farmers and Graziers Association should be considered by the SFMC.

A structured, systemic and proactive approach to hazard reduction would probably require amendment to the *Local Government Act 1999* to empower councils in a similar way to TFS and possibly establish obligations as envisaged by the Tasmanian Farmers and Graziers Association, and the development of a strategic and planned approach by the SFMC.

One final matter to discuss in this section is the need for specific emergency management plans for areas of high risk. The bushfires on the Tasman Peninsula highlight the risks posed by the local conditions and it is not necessary to canvass those again. There should be a program involving the preparation of contingency bushfire plans (and for other hazards) across the state for these high risk areas, so that risks are mitigated by appropriate emergency management action.

Recommendation 81 – that the State Emergency Management Committee considers structuring the Tasmania Emergency Management Plan in a way that provides more specific guidance, commitment to and accountability for action to be taken.

Recommendation 82 – that the State Emergency Management Committee determine suitable risk management tools, such as the Bushfire Risk Assessment Model, and encourages their use in assessing bushfire risk in a consistent manner.

Recommendation 83 – that a specific risk prevention and mitigation advisory body be established for the State Emergency Management Committee.

Recommendation 84 – that the resources available to the Parks and Wildlife Service, to manage bushfire risk following the recent increase in land under its tenure, is reviewed.

Recommendation 85 – that the Government considers whether a peak body should be established, with authority to effectively implement a bushfire mitigation plan.

Recommendation 86 – that the State Fire Management Council considers developing a structured, systemic and proactive bushfire hazard reduction program with municipal councils and Tasmania Fire Service; and advises the Government on any legislative or other changes required to implement such a program.

Recommendation 87 – that the State Emergency Management Committee includes in its planning, the development of contingency emergency management plans for areas of high risk due to local conditions.

Recommendation 88 – that the State Fire Management Council note the decline in machinery and skilled operators from the forestry industry in the private sector and determines how this reduction in fire management capability can be addressed.

Enforcement of Criminal and Other Inappropriate Behaviour

An effective risk management strategy for bushfires is to deter intentional, reckless or negligent behaviour that causes bushfires (or increases the risk of those fires) by prohibiting or regulating this behaviour with suitable legislative sanctions.

The Inquiry was not able to examine this matter, but was advised that the current approach was ineffective as the current laws were not rigorously enforced.

To provide some scope for consideration of whether this area warranted further attention, the Inquiry obtained data from the TFS Australian Incident Reporting System on the cause of fires between 1 July 1998 and 13 March 2013. A preliminary analysis indicated there were 31128 vegetation fire incidents reported, and within this data:

- 11 258 fires were deliberate
- 6 105 were accidental–misuse
- 8 393 were undetermined.

The number of deliberately-lit fires appears to be substantial. However, it is likely that many of these were not fully investigated and the true cause identified or at least classified as suspicious. It is expected that this category would include arson as well as regulatory breaches such as lighting a fire without a permit.

During a permit period, a permit is required for any fire greater than one cubic metre in size. Anecdotal advice to the Inquiry suggests that if a brigade attends a fire where a permit should have been obtained, then one is sometimes issued retrospectively rather than to prosecute a person in breach.

With negligent fires, classified as accidental–misuse, there may be a breach of the legislation, such as not adhering to permit conditions or properly controlling a fire. Again it is suggested that there are few investigations, infringements or prosecutions.

The large number of undetermined fires may be due to the difficulty in identifying a cause or because they have not been investigated for this purpose.

If this situation is correct, it may indicate a very relaxed attitude towards enforcing the law or insufficient investigatory resources being applied to the matter. Certainly, any rigorous enforcement program will need suitable investigatory capability in resources and skills for TFS and Tasmania Police (TASPOL). A suggestion made to the Inquiry included re-establishing an Arson Squad. This is a matter for TASPOL, but there should be the necessary skills to examine crime scenes and investigate criminal offences.

If there is not a suitable enforcement arrangement, then an important strategy for preventing and mitigating bushfire risk will not be in place.

Recommendation 89 – that the legislation and enforcement arrangements are reviewed to ensure there are suitable offences and penalties, investigation and enforcement capabilities, and a rigorous approach is taken to breaches of the law.

Fuel Reduction Burning

Fuel is an essential element of a fire model and it contributes to fires igniting and the intensity of a fire. For bushfires the fuel is vegetation. Reducing vegetation can prevent a bushfire, help in the way it is managed, and reduce its intensity and impact. Putting aside direct fire management (such as with back burning), the primary means of reducing vegetation is through controlled burning. This is the issue to be discussed in this section.

In the Lake Repulse, Bicheno and Forcett fires, previously burnt areas had an influence on the behaviour of the fires. Detail of this can be seen in PART D. Comments in the PWS submission should also be noted, in that less than 5% of the area burnt by the Forcett fire is managed by PWS; that a more extensive fuel reduction burning program by PWS would not have made any difference to the overall damage caused; and that fuel reduction burning has limited value in assisting fire control under very extreme weather conditions.³⁸

Fuel reduction burning (also referred to as prescribed or controlled burning) is a highly contentious subject. Conflicting interests have been a cause for a lack of progress in preventing and mitigating bushfire risk by this treatment method.

Fuel reduction burning has been closely examined in a number of inquiries into bushfires. The 2009 Victorian Bushfire Royal Commission convened an expert panel and there is a detailed examination of the subject in its Report. Recommendation 56 proposed an annual program of prescribed burning of 5% of public land. The Inquiry, therefore, is not intending to undertake such a detailed analysis and accepts that fuel reduction burning is a legitimate risk management strategy for bushfire.³⁹

Fuel reduction burning to reduce bushfire risk can be conducted on private and public land, to clear along roadways, to create fire breaks, and to abate hazards. Hazard abatement has been referred to in the previous section and this could include clearing along roadways. All these areas could be included in fuel reduction burning programs.

Only certain types of vegetation are suitable for treatment by fuel reduction burning. This includes dry eucalypt forest, scrub, heathland and button grass, but not wet eucalypt forest and alpine heathland and woodlands. These are approximately 2.57 million treatable hectares of dry woodland, forest, heath and moorland in Tasmania in which fuel reduction burning could reasonably be undertaken. Of this 0.86Mha are in reserves managed by PWS, 0.5Mha are in State Forest, 0.1Mha on unallocated Crown lands, and the balance (1.1Mha) are on privately owned lands and other lands. Treatable vegetation by land tenure is set out in Table 1.6.⁴⁰

38 Submission No. 85, at p. 11.

39 The Operational Guidelines and Review of Current Knowledge for Planned Burning in Tasmania, Jon Marsden-Smedley for the Tasmanian Fire Research Fund, is also a very useful source of information.

40 Email received from Adrian Pyrke, Parks and Wildlife Service, on 12 July 2013.

Table I.6

Class Name (TASVEG)	PWS fuel reduction burning Treatable Area (ha)	Forest Reserves fuel reduction burning Treatable Area (ha)	TFA fuel reduction burning Treatable Area (ha)
Scrub, heathland and coastal complexes	153,712	2,015	6,410
Dry Eucalypt Forest and Woodland	250,535	83,032	182,090
Moorland, Sedgeland, Rushland and Peatland	551,385	5,029	30,349
Non-Eucalypt Forest and Woodland	5,613	206	197
Agricultural, Urban and Exotic Vegetation	3,785	862	2,813
Native Grassland	7,162	133	210
TOTAL TREATABLE AREA (ha)	972,192	91,277	222,069
% treatable	38.7	41.2	43.2
TOTAL RESERVE AREA (ha)	2,509,565	221,785	514,500

Not all vegetation can be burnt at any time and the level of dryness and weather conditions are also factors that determine when and how fuel reduction burning can be conducted.

Another matter to consider is hot and cool burning, which relates to a fire's intensity and the impact it will have on the vegetation, with a hot burn causing much more significant damage.

The *Fire Services Act 1979* sets out requirements for fires, fire usage, where fires cannot be lit, and how fires should be managed. Fire permits are the most relevant form of regulating fuel reduction burning. A fire permit period can be declared by TFS, so that fires over one cubic metre in size require a permit. During this period, any person wanting to conduct fuel reduction burning will need to obtain a permit. The permit period is determined by an assessment of fire risk and is generally dependant on soil dryness.

A fire permit period will vary in timing and it can apply throughout the state or to any part of the state.⁴¹ Usually periods are declared by region; that is the three fire regions in the state. When and where permit periods apply is controversial with land holders, mainly farmers.

Fire permit officers are appointed by the SFMC from brigade members in fire management areas on the basis of their skills, qualifications or experience. They are required to consider advice, recommendations and reports from the State Fire Commission or the local Fire Management Area Committee.⁴² Fire permits for land managed by PWS are issued by appointed TFS officers and for Forestry Tasmania they are issued by appointed Forestry Tasmania officers.

Permits can further be controlled depending on conditions, by the capacity to issue an embargo on the issue of permits across a region, and by declarations of a total fire ban.

41 *Fire Services Act 1979*, s. 61.

42 *Fires Service Act 1979*, ss. 65 and 65A.

One of the issues that can arise is the conflict of interest inherent in the issue of permits; land holders may want a permit when conditions for burning are right, but the issuing officer has an interest in avoiding fires and may adopt a risk averse approach.

How much fuel reduction burning occurs now? Most fuel reduction burning occurs on public land. Data is available from PWS and Forestry Tasmania, but the burning on private land is under-reported because it occurs before a permit period, or without a permit, or the size of a permitted burn is not accurately recorded. As a percentage of treatable vegetation, the percentage subjected to fuel reduction over the last three years is estimated at:

- 1.56% in 2010–11
- 0.27% in 2011–12
- 0.63% in 2012–13.

The amount of treatable vegetation burnt is likely to vary between years to some degree, depending on whether conditions are favourable or not.

Parks and Wildlife Service (PWS)

PWS conducts its fuel reduction burning programs through Strategic Fire Management Plans for each of its regions. PWS defines its land in terms of fire management zones:

- asset zone: assets of high strategic importance, including natural, cultural and economic values
- asset protection zone: areas of high strategic importance to protect values in Asset Zones
- strategic fuel management zones: areas that will increase the likelihood of controlling a bushfire or the spread of a fire and to contain the size of a fire to no more than 5 000 hectares
- land management zone: to maintain appropriate regimes for the landscape vegetation communities, species diversity and cultural heritage.

The highest priority is assigned to asset protection zones. The BRAM risk assessment model is used to further refine priorities in these zones. The PWS zoning approach and the use of BRAM are being further refined.⁴³

PWS supports fuel reduction burning and endeavours to do as much as it can with the resources available. An increase in the area subjected to fuel reduction burning would require additional resources. This is particularly relevant to the expansion of the area under its control and a recommendation has been made to review its resources.

PWS told the Inquiry that fuel reduction burning programs are carefully planned well in advance of when they occur by specialist personnel. Priority is given to burns with the most strategic advantage for protecting towns and communities. PWS asserts that to adequately mitigate bushfire risk, much more burning is required in the state.⁴⁴

43 Submission No. 85.

44 Submission No. 85 at p. 10.

Forestry Tasmania

Forestry Tasmania conducts burning programs, some of which are fuel reduction burning. High intensity burning occurs as part of the logging process, mainly for regeneration of forests assets. Some low intensity risk mitigation burning occurs and this is intensively planned and conducted in accordance with established practices. Fuel reduction burning is usually on the periphery of important logging assets. Over the last three years, there were four fuel reduction burns in 2009–10, eight in 2010–11 and one in 2011–12. Waste material in heaps and windrows is also burnt.

Forestry Tasmania supports an expanded fuel reduction burning program, arguing that it is particularly valuable in two situations: close to or adjoining high value natural and capital assets, and as broad strips strategically located across historical fire paths. It is said to be most valuable of all in the urban interface zone, where low density housing has occurred and houses are surrounded by natural bush and often with poor vehicle access.⁴⁵

Municipal Councils

Local councils have an interest in risk mitigation with land under their control. Capability varies with councils, depending on their land assets and the resources available to them. Larger councils, such as Hobart City Council, have fire management plans that include cultural and biodiversity issues. Fuel reduction burning is usually smaller in size and of a tactical nature, rather than being strategic. There are also constraints for councils around the urban/rural interface. Many councils concentrate on removing hazards from land under their control, frequently by mowing and brush cutting. Local brigades often assist councils in their burning operations.

Others

There are a number of major private forest companies managing plantation timber and native forest. Norske Skog has been referred to in the previous section. It appears that no high intensity burning occurred last fire season and generally low intensity fuel reduction burning occurs with fire management plans.

Fuel reduction burning on private land is difficult to assess. There is often little appreciation of the risk and a lack of skill in managing vegetation fire. Brigades help land holders, but this is not coordinated, usually not well recorded, and is of a tactical nature. Some of the bigger land holders do not manage the fire risk on their land well. The farming and agricultural sector is much better positioned to conduct fuel reduction burning on their land, with many land holders having a strong interest and experience in fuel reduction burning.

There is an interface of interests which tend to be unfavourable to fuel reduction burning, including:

- the risk of fire escaping from a fuel reduction burns and damaging other property
- competing land uses, some of which can be affected by smoke, such as the wine industry (and the best time for fuel reduction burning often coincides with a period of most vulnerability for the wine industry)
- air quality and smoke pollution, with lifestyle and potential health effects
- conservation and environmental issues

⁴⁵ Submission No. 76, at p. 42.

- land holders who do not want to do fuel reduction burns, compromising fuel reduction burns by others.

Legislation provides for some of these interests, including:

- permits are to be obtained under the *Threatened Species Protection Act 1995* to protect native flora and fauna
- smoke management is required under the *Environmental Management and Pollution Control Act 1995*
- Aboriginal heritage needs to be protected
- there are requirements under the *Nature Conservation Act 2002* and Forest Practices Code.

The Inquiry received a wide variety of submissions on the issue of fuel reduction burning. In terms of conservation, some argued that protected areas created a fire risk and they could not convince people to approve or undertake fuel reduction burning, so that with the hot burn of the 4 January fires the protected area is now a wasteland for flora and fauna. It is not possible to examine individual cases to determine the accuracy of claims; nor is it likely to be possible to reconcile competing views on these sensitive issues.

Submissions were received from parties expected to have environmental and conservation views and there was some in-principle form of recognition of the need for fuel reduction burning. For example, the Tasmanian Conservation Trust said it 'understands and supports the need for appropriately planned and implemented controlled burning of many forest and non-forest vegetation types'.⁴⁶

A distinction was made between supporting hot and cool burns. In this sense, Forestry Tasmania's practice of regeneration burns using high intensity fire to make the environment suitable for seeding was opposed, but fuel reduction burning cool burns were seen as managing the natural environment and supporting its biodiversity complexity.⁴⁷

It should be possible to reconcile these competing interests through the BRAM risk assessment process, as it is intended to take into account the various values and by taking a strategic approach. However, it is probable that it will not be possible to accommodate every interest as it may limit the practicality of fuel reduction burning. The protection of life should be the highest value and priority. The notion of targets for fuel reduction burning will be discussed later in this section.

Farmers, farming groups and the Tasmanian Farmers and Graziers Association made submissions, and the Inquiry met with some of them. Not all issues raised are within the Inquiry's terms of reference (for example, the Government meeting half the cost of fencing on the boundary with Crown). In general, these broad issues were raised:

- not enough fuel reduction burning was occurring on Crown and other public land, putting their properties at risk
- the interrelationship between the various pieces of legislation was too complex and contradictory

46 Submission No. 59. See also submission No. 91.

47 Submission No. 91.

- conservation and environmental issues stop farmers from being able to protect their land by conducting fuel reduction burning where and when they think best
- the permit system was a cause of restriction and aggravation.

The scale of fuel reduction burning will be discussed later in this section.

The interrelationship between the various pieces of legislation is complex, but there does not appear to be a direct inconsistency between them. It is more likely that they are misunderstood because of the complexity, and it may be possible to clarify this with some clear advice available to the public. Indeed, it would be of broad value to have some consolidated information on the various pieces of legislation available in a simple form for the community.

Concerns about not being able to protect their land seem to involve entering into conservation covenants. Sometimes this followed landowners applying for the certification of a forest practices plan, to harvest timber or to clear their land, and this was refused for conservation reasons. When this plan was not approved, the landowner then negotiated and was paid for a conservation covenant. Landowners may feel that they have been forced into this position and may want to now conduct fuel reduction burning on this land. The issue is dependent on the terms of the conservation covenant they agreed to and it is not something this Inquiry will deal with.

The permit system was the subject of a number of concerns:

- that the permit system should not apply to farmers, who should be able to conduct fuel reduction burning when the conditions are right
- farmers should not have to prepare fire plans
- farmers should not have to register any fuel reduction burning outside a permit period
- conditions of fire risk are not the same across all areas and permit periods were too broad and general, in both time and location, and unnecessarily restricting burning
- some permit officers were too risk averse and would not issue permits
- permits could not be quickly obtained
- because of the difficulty with permits, farmers did not do any fuel reduction burning in the permit period.

PWS also raised practical issues in conducting fuel reduction burns even with a permit:

- identifying suitable boundaries for fuel reduction burns — often the logical boundaries are on private property that adjoins reserved land
- engaging neighbours or stakeholders to agree to, or assist with, burning on their land
- providing adequate firefighting resources when neighbouring assets are of high value
- managing the impact of smoke on public health, road safety and wine growers
- mitigating the risk of escapes.⁴⁸

48 Submission No. 85 at p. 10.

The Tasmanian Farmers and Graziers Association also submitted that community fire management effectiveness needs to be maximised by delegating as much authority as possible to land owners and volunteer bushfire brigades.⁴⁹

The Inquiry is satisfied that there should be controls for conducting fuel reduction burning during periods of heightened bushfire risk. It is neither practical nor desirable to exempt individuals or organisations from reasonable controls where there isn't a satisfactory way of ensuring they have the knowledge, experience and resources to manage fuel reduction burning without creating a risk to other members of the community. However, it may be possible to authorise people and organisations where suitable conditions are satisfied. This is a matter which should be further examined by TFS.

The Inquiry is also satisfied that a more flexible approach should be taken to the declaration of permit periods so there is a better match between period, area and the fire risk. The way permits are issued should also be examined to ensure permit officers aren't unduly risk averse and the process occurs in a timely and efficient way.

It may be appropriate to change the name of the permit period to better emphasise the fire risk, for example, by calling it the Bushfire Danger Period.

Further, to provide greater confidence to the community in the permit system, as well as to ensure there is accountability in the process, a means of reporting to the community on the management of the permit process should be established. The best means of doing this is to include the information in TFS's annual report and on its website. The information should correlate with the way the system should operate; for example, the number of permits applied for and refused, reasons for refusing a permit, and the time it takes to approve a permit.



Image courtesy of Workplace Standards Tasmania

The manner in which fuel reduction burning is being conducted at the present was also an issue for a number of farmers. There were suggestion that there was too much science going in to burning programs, once fuel loads reach 10 tonnes per hectare the fuel needs to be removed, plans take too long to develop, plans should be across tenures and burning done by local brigades, plans for fuel reduction burning should include private nature reserves and land bought for biodiversity offsets, and state and local government should maintain road verges.⁵⁰ These are matters the State Fire Management Council should consider in developing its program.

There is much support for an expanded fuel reduction burning program and the Inquiry is satisfied that this should occur as a high priority. The Tasmanian Farmers and Graziers Association proposed that a systematic and comprehensive program should be established. It is a fact of history that these programs are recommended by inquiries into major bushfires, but the complexities of dealing with competing interests and requirements, in addition to not committing sufficient resources, often sees them wither on the vine. A question then arises, what does an expanded program mean? As indicated above, the 2009 Victorian Bushfire Royal Commission specified a 5% annual fuel reduction program on public land.

Setting quantitative targets has its difficulties. Not all vegetation is treatable and it could be satisfied by reducing fuel in an area where there is a very low risk to people and assets. The pattern of fuel reduction burning should be considered rather than large blocks, to provide the best protection. Suitable weather will affect the timing of a fuel reduction burning program and it may be that some years are better than others. Moreover, there should be an integrated program involving both private and public land.⁵¹

A strategic approach is preferable to simply setting a quantitative target. PWS submitted that meaningful targets could be calculated based on zoning, risk assessment and ecological sustainability.⁵² Fuel load, as suggested in a submission, would be part of the risk assessment.

The State Fire Management Council has obtained funding to prepare a Strategic Fuel Management Plan for Tasmania and this would be managed by a unit within the State Fire Management Council.⁵³ Conducting research to establish the scientific case for strategic fuel management is the first step in the project and it is expected this will take 12 months. The Manager of the State Fire Management Council informed the Inquiry that there was enough evidence available to support a strategic fuel management program, and what was needed in the research was to identify the zones and percentages of treatable area required.

It is envisaged that there would be a significant increase in fuel reduction burning each year, but that it would take several years to undertake the planning, and build up capacity, resources and experience. A phased approach to introducing the plan is envisaged, as appears to have been the experience in Victoria and New South Wales.⁵⁴

Restructuring the Fire Management Area Committees is a key element of implementing the plan. The Fire Management Area Committees would produce fire protection plans and

50 Submission No. 52.

51 Submission No. 91, at p. 7.

52 Submission No. 75, at p. 10.

53 Refer to Submission No. 72 for detail on the process of developing the proposal.

54 Submission No 72, at p. 4.

these would incorporate information from other plans, such as bushfire mitigation plans and community protection plans. It is also envisaged that planning would cross all land tenures and deal with conservation and environmental sensitive issues, including conservation covenants.

This strategy will not be without its difficulties. It is a cooperative model with numerous stakeholders, and reservations were expressed in the previous section on whether the cooperative model will work. Other issues include whether private land owners can be compelled to reduce fuel on their land, who will pay for the cost of mitigation action, what legal protection is there for people engaged in fuel reduction, and how will the different interests in the various pieces of legislation be reconciled. For example, will the *Emergency Management Act 2006* be able to be used to overcome restrictions in conservation covenants? No doubt it would be of assistance to simply be able to manage the various interests in a collective way.

The delay in introducing an effective fuel reduction burning program should be disappointing for many people. Concerns have already been expressed by the Inquiry about the cooperative nature of this model (refer to that section of the Report). Considering the delays, the form of the model and the difficulties likely to be encountered, Government commitments should be made to actively support the plan. Otherwise, the Inquiry is not confident that meaningful bushfire risk mitigation will be achieved by fuel reduction burning.

One final comment in this area is on setting targets. A problem with not having a measurable target is accountability, and the tendency for activities to discontinue if they are not monitored. Taking a strategic approach and setting targets are not incompatible. There should be measurable targets set by the State Fire Management Council as part of the plan and these should be reported on in its annual report.

Recommendation 90 – that Tasmania Fire Service or another suitable agency provides information to the community which shows, in simple form, the legislation applicable to approvals for lighting fires on private property and the various relationships between that legislation.

Recommendation 91 – that Tasmania Fire Service conducts a review of the fire permit system in the Fire Service Act 1979, and implements change to improve the efficiency and effectiveness of the system by:

- *considering whether it is appropriate to authorise persons or organisations to conduct fuel reduction burning during a permit period*
- *providing a better match between the period, area and fire risk*
- *maintaining a timely and efficient process for issuing permits*
- *naming the period in a way that draws attention to bushfire risk*
- *establishing a reporting and accountability process.*

Recommendation 92 – that the Government actively support the timely development and implementation of an ongoing Strategic Fuel Management Plan.

Recommendation 93 – that the Strategic Fuel Management Plan includes measurable targets and they are actively monitored and reported on to the community.

Building in Bushfire-Prone Areas

Land use planning and building in bushfire-prone areas is an important part of risk management. This is especially so, considering demographic and climate change, with more people living in bushfire risk areas and a heightened risk of bushfires occurring. The 2009 Victorian Bushfire Royal Commission devoted considerable attention to this subject, providing comment and making recommendations on planning, developing and building in bushfire-prone areas.

In the Auditor-General's Special Report No. 99 on bushfire management, where progress in implementing the recommendations of the 2004 COAG Report was examined, the COAG Report was cited as reporting that land use planning was the single most important mitigation measure for preventing future bushfire loss. In 2011 when the Auditor-General reported, changes had not been made to the regulation of land use planning and building construction, and disappointment was expressed over the delays and the protracted nature of change.⁵⁵

Significant changes have recently been made in Tasmania, with the introduction of the Bushfires-Prone Area Code. Potentially a broad range of land usage might be included in this subject, such as agricultural and primary production which increases fuel hazards, and building fire safety bunkers for residential dwellings.

A significant barrier, especially from a residential dwelling perspective, is the community's appreciation of the risk and its preparedness to implement sometimes costly protective measures. People tend to forget the risk very quickly, even following major and catastrophic fire events. Building community resilience and educating people about the risk of living in bushfire prone areas should contribute to a greater acceptance of the need to introduce and maintain bushfire safety measures in land use.

Before the recent initiative, there was a wide diversity to the inclusion of bushfire requirements in council planning arrangements and a lack of consistency in approach. From November 2012, Planning Directive No. 5 included the Bushfire-Prone Area Code in the Building Regulations 2004, which activates the relevant requirements of the Building Code of Australia.

A bushfire-prone area is defined and the code essentially regulates land use and buildings which involve people occupying buildings in areas likely to be subjected to bushfire in the future. Construction standards, vegetation management, access to water supplies, emergency vehicle access and evacuation options are among the issues covered.

This is a mandatory requirement for any new planning scheme and will apply uniform standards across Tasmania. It currently is in the process of implementation with councils and not all have yet incorporated it into their planning schemes. Measures may need to be taken to ensure all councils adopt the Code as a priority.

A system of accredited assessors will be provided to certify proposals, and TFS is responsible for accrediting these assessors. The training and accreditation process is currently being undertaken.

⁵⁵ Report of the Auditor-General, Special Report No. 99, Bushfire Management, June 2011, at pp. 54 to 58.

The new code and the arrangements appear to be a substantial improvement, but there are some aspects which need to be considered:

- the scheme does not apply to existing buildings
- standards following development and construction will be difficult to monitor and maintain
- knowledge and expertise on land use and construction for bushfire safety needs to be further developed
- a means for continuing to develop improvements should be established.

In respect to the latter point above, one option is to formalise the industry reference group used for the development of the Bushfires-Prone Areas Code and give it a broader terms of reference. Another suggestion is to establish a State Policy on Climate Change and Bushfire Management.⁵⁶

Land use planning and building construction is a substantial and complex subject, and the Inquiry has not been able to undertake a comprehensive examination of this area of bushfire risk prevention and mitigation in the time specified by the terms of reference. However, it is an area which should be accorded a high priority and resources and expertise should be devoted to ensuring appropriate measures are adopted and implemented as soon as possible.

Recommendation 94 – that the Government makes land use planning and building construction to prevent and mitigate bushfire risk a high priority and establishes a means to progress improvements in this area, such as a designated body or group, as soon as possible.

Building Community Resilience

Community resilience was commented on in PART F in the context of a resilient community being able to recovery more quickly from an emergency. Comments there should be read with this section.

In 2009 COAG agreed to 'adopt a whole-of-nation resilience-based approach to disaster management'. Subsequently, in February 2011 COAG approved the National Strategy for Disaster Resilience. The key policy intention is outlined in the following extract from the 2009 COAG Statement, as provided in the National Strategy for Disaster Resilience:

A collective responsibility for resilience

Given the increasing regularity and intensity of natural disasters, Australian Governments have recognised that a national, coordinated and cooperative effort is required to enhance Australia's capacity to withstand and recover from emergencies and disasters. A disaster resilient community is one that works together to understand and manage the risks that it confronts. Disaster resilience is the collective responsibility of all sectors of society, including all levels of government, business, the non-government sector and individuals. If all these sectors work together with a united focus and a shared responsibility to improve disaster resilience, they will be far more effective than the individual efforts of one sector.

⁵⁶ Submission No. 91, at p. 15.

Role of government

Governments, at all levels, have a significant role in strengthening the nation's resilience to disasters by:

- *Developing and implementing effective, risk-based land management and planning arrangements and other mitigation activities;*
- *Having effective arrangements in place to inform people about how to assess risks and reduce their exposure and vulnerability to hazards;*
- *Having clear and effective education systems so people understand what options are available and what the best course of action is in responding to a hazard as it approaches;*
- *Supporting individuals and communities to prepare for extreme events;*
- *Ensuring the most effective, well-coordinated response from our emergency services and volunteers when disaster hits; and*
- *Working in a swift, compassionate and pragmatic way to help communities to recover from devastation and to learn, innovate and adapt in the aftermath of disastrous events.⁵⁷*

A draft Implementation Plan has been developed by the SEMC, but it has not been approved. A copy of the plan is at Appendix I.1 – copy of plan in the appendices. The first step in the draft plan was to audit the then current activities in terms of the framework of the National Strategy for Disaster Resilience (NSDR), and this has been completed. A number of procedural actions have also been taken, including linking funding guidelines for programs, providing agencies with key messages, linking SEMC priorities and linking a draft SEMC strategic directions document to the NSDR strategies. However, no action of substance has been taken to develop an appropriate strategy for Tasmania or to implement the NSDR. This is apparently due to a lack of resources and other priorities.⁵⁸

A suitable strategic plan for Tasmania is preferable to just implementing the NSDR, so that key policies and strategic directions can be tailored to Tasmania's circumstances and needs. The White Paper on Victorian Emergency Management Reform provides some indication on what the content of a strategy at state level might look like:

- *engaging the community: community resilience is established by ensuring people in that community are fully engaged in the resilience-building process and that the process is led from within the community*
- *community-based planning to mitigate hazards: community resilience can be improved by using planning approaches that consider likely risk factors and vulnerabilities, and identify how to mitigate against those risks*
- *community awareness and education: emergency service organisations and government departments currently deliver programs that help people make informed emergency-related decisions*
- *making information available during emergencies: initiatives to foster long term behavioural change do not replace the need for ready access to information during an emergency*

⁵⁷ National Strategy for Disaster Resilience

⁵⁸ Email message from Director of State Emergency Services, 9 August 2013.

- crisis management planning: planning and preparation using tools like business continuity plans can help governments, businesses and the public more easily navigate the disruption and adapt to new circumstances
- managing risks to critical infrastructure: the ability of critical infrastructure industries to continue functioning through an emergency is vital to a community's resilience
- coordinating relief and recovery in communities. Enabling communities to contribute to their own recovery is essential to restoring community functions
- role of local government: local government is a key component of Victoria's emergency management system.⁵⁹

It can be seen that the intention is to take a more holistic approach to community resilience, and not to bolt-on a collection of initiatives. This list also reflects significant aspects of the emergency management arrangements dealt with in other parts of this Report, which reinforces the integral role community resilience is intended to have.

The project developing a Strategic Directions Framework for the SEMC referred to in the section on Risk Assessment, Responsibilities and Planning, includes a strategic direction for Building Resilience. This project may help overcome current weaknesses in the approach to community resilience.

Community education is a significant component of community resilience and is recognised as such within the authorities with bushfire management responsibilities. A key strategy is to educate and inform the community of bushfire risk and the options available to them. In PART G this area was examined in detail and it is not proposed to reiterate the discussion there. In particular, detail in the preliminary Bushfire Cooperative Research Centre's report on the Forcett fire was examined, but the primary focus there was on how people responded on the day of the fire.

Long-term preparations are an important basis for community resilience, and the Bushfire Cooperative Research Centre's report sought information on this. The three most frequently reported long-term preparations by residents in the area of the Forcett fire were clearing vegetation around the house (66%), having an unwritten bushfire survival plan (53%) and clearing space around the home (51%). The least reported (all less than 5%) were reviewing the local community protection plan, ensuring house security protection and having a written bushfire survival plan.

A comparison with other states on this topic was sought to obtain some measure of how effective the education programs have been in Tasmania. Survey results from the Bushfire Cooperative Research Centre over the 2012–13 fire season at Table I.7 indicate:⁶⁰

Table I.7

	Tasmania	South Australia	New South Wales
Written plan	11.5%	26.1%	11.6%
Mental plan	81.2%	84.6%	69.8%

Note: the figures do not aggregate to 100% due to definitions used.

⁵⁹ Victorian Emergency Management Reform, White Paper, Government of Victoria, December 2012.

⁶⁰ Email from Damien Killalea, Director, Community Fire Safety, Tasmania Fire Service, 7 June 2013.

Care should be taken in drawing conclusion from this data and it is only provided for illustrative purposes. It does suggest a low take-up rate for written plans in the community, but a fairly high penetration rate for unwritten plans.

As indicated above, there is a clear recognition of the importance of community education on bushfire safety and this was included in the 2004 COAG Report. For example, one recommendation was that national and regionally relevant education programs about bushfire be developed and implemented. The Auditor-General examined this recommendation in Special Report No. 99, and found that while high quality education material was being delivered in Tasmanian schools, the full implementation of the recommendation was dependent on the national curriculum.

The subject of educating the community requires further examination. However, the Inquiry wants to emphasise that there should be a professionally developed communications strategy on all dimensions of educating and informing the community, coordinated across the fire authorities. It would appear to be appropriate that TFS should take the lead in this matter. Other measures are being introduced by TFS to build community bushfire resilience include the Community Protection Plans and Bushfire Ready Communities (referred to in PART H). These initiatives are related and are still works in progress. They are important and practical ways of managing risk and building community resilience, with an emphasis on being ready in a bushfire emergency.

The Bushfires Ready Project commenced in 2009 and it recognises that communities differ in their needs and capabilities, and preparations are tailored accordingly. Community protection planning uses different plan formats to assist communities to prepare by identifying Nearby Safer Places (assessed against criteria) for people who are at immediate risk from a bushfire to use for shelter.

Recommendation 95 – that a bushfire community education and information strategy be professionally developed and coordinated across the fire authorities by Tasmania Fire Service.

Recommendation 96 – that the State Emergency Management Committee develops and coordinates a whole-of-government community resilience strategy for emergencies in a form that can be practically implemented, as a priority.

Effectiveness of Risk Management Strategies and Plans

Emergency risk prevention and mitigation does not appear to have been a high priority in the emergency management arrangements, though there has been better development in the area of bushfire risk.

At state level, the SEMC is not structured in a way which focusses on risk prevention and mitigation, the TEMP does little to detail action and accountability, and the few risk initiatives developed by or for the SEMC have been at a high level with little emphasis on practical implementation and readiness. Fundamental change in the structural arrangements and the approach to risk management should be considered.

A current project to develop a strategic framework for the SEMC may overcome some of the long-standing weaknesses in the state level arrangements and approach to key issues.

There has been more activity for bushfires and it should be noted that many of the issues dealt with in other parts of this Report relate to bushfire risk management. But so too do weaknesses in those issues, such as the state of readiness discussed in PART G. Specific bushfire related risk prevention and mitigation issues have been examined in this part. Some risk management arrangements for bushfire are either in place or being developed.

However, this area is not without difficulty, and further improvements should be considered, including:

- adopting common risk assessment tools
- reviewing whether the cooperative approach through the SFMC is suitable or some form of peak bushfires authority is required
- establishing a more structured and systemic arrangement for reducing bushfire hazards
- overcoming the decline in resource availability for bushfire management in the forestry industry
- establishing a suitable expanded and on-going fuel reduction program in a timely way
- reforming the fire permit system.

Progress has been made with the new code for building in bushfire-prone areas and it is in the process of being implemented. Further reform on building in bushfire-prone areas should be considered.

The present approach to building resilient communities lacks progress and substance, and is not directed at creating a strategy tailored for Tasmania's needs. This may be overcome to some degree with the strategic framework project. Opportunities are being missed and more should be done.



Photo courtesy of Warren Frey

PART J – IMPROVING EMERGENCY MANAGEMENT ARRANGEMENTS

The emergency management arrangements in place at the time of the fires on 4 January were applied by Tasmania Police (TASPOL), Tasmania Fire Service (TFS) and other responsible agencies and organisations. There is no suggestion that there was any lack of commitment by any person or organisation in undertaking their duties. To the contrary, responsible people generally applied themselves assiduously and in a professional manner. Many people should be highly commended for their efforts. However, the emergency management arrangements currently in place were not adequate and substantial improvement should be sought.

Comments on the effectiveness of the arrangements have been made in PARTs E to I and recommendations made in relevant sections to improve specific aspects of the arrangements or related issues. The Inquiry recommends that the Government makes more substantial changes to the emergency management model and the way it works, within which these recommendations can sit. If a new model is not adopted, these recommendations are still valid.

Change is Necessary

A number of principles for effective and practical arrangements are outlined in PART C. They are equally relevant in developing a new model and are restated for application:

- roles and responsibilities, especially lines of authority, should be clear and unambiguous – there is not time to develop or debate this in an emergency
- people with operational roles should not be distracted by meetings which are either unnecessary or of marginal value for that person
- operational structures should be as direct and as simple as possible
- action should be proactive wherever possible
- ‘cold’ starts should be avoided

- arrangements should be made which can be scaled up and do not have gaps due to hand-over arrangements
- all necessary elements for managing emergencies – command, control and coordination – should be included
- arrangements should be prepared, ready to use
- there are limited significant emergencies in Tasmania to gain experience in – use every opportunity to test and practice arrangements.

In summary, the main difficulties with the operations for the fires during January 2013, as they relate to the emergency management model were:

- the concept of operations was not properly focussed on response and recovery operations at a state level
- responsibilities were not clearly defined at a state level
- there was an over-reliance on committees
- there was no established structured arrangement for coordinating response operations across agencies and organisations
- plans were not sufficiently comprehensive and ready for implementation.
- key policy issues were not determined and planned for
- facilities to support principal leadership roles in response and recovery were not well established
- arrangements were not designed to be ready for implementation
- there was not sufficient emphasis on proactive action
- the model at municipal level is not clear and appropriately conceived
- there should be greater scope for declarations of emergency
- there should be broader access to emergency powers
- the need for three levels of emergency management is questionable.

Reform is being progressed by the State Emergency Management Committee (SEMC) and the Security and Emergency Management Advisory Group (SEMAG) (for example, on interoperability), but it is vitally important to get the fundamentals right as a higher priority.

For the two primary agencies in managing fire emergencies, some changes should be considered to enhance their overall effectiveness.

TFS is well positioned to deal with fire and other emergencies within its mandate. Maintaining focus on its core purpose and competencies, and improving its proficiency and capability, should be at the forefront of the good governance of the organisation. In particular, there should be a continued emphasis on improving the control, continuity and accountability of its operations and ensuring that the strategies and tactics it uses are the most effective to fulfil its role.

It is beyond the scope of the Inquiry to undertake a comprehensive evaluation of TASPOL's capability in emergency management. However, it appeared to the Inquiry that TASPOL is not so well positioned for emergency management and could enhance its capacity, consistent

with the reasons for change discussed below. More specifically, TASPOL could embrace a culture of emergency management throughout the organisation, not just at the higher levels and in certain positions. Emergencies occur at all levels and suitable capabilities should be fundamental throughout the organisation.

To enhance its capability in line with contemporary emergency management practices throughout Australia, resources need to be dedicated to building expertise, embedding a suitable culture, progressing change and supporting state emergency management arrangements. Investment also needs to be made in examining the arrangements in place in other jurisdictions, not only to establish suitable arrangements, but to remain abreast of developments and change in Australia.

Recommendation 97 – that Tasmania Police conducts a review to ensure emergency management is treated as a priority and a core function throughout the organisation, including the development of contemporary capabilities, and is supported by an appropriate culture.

Recommendation 98 – that Tasmania Police establishes a section within its structure with responsibility for developing and maintaining contemporary expertise in emergency management, progressing innovation, assisting organisational change initiatives and supporting its responsibilities in state emergency management arrangements.

Recommendation 99 – that Tasmania Police develops and implements a program for examining emergency management arrangements and facilities in Australia.

In addition to the commentary above, there are other compelling reasons justifying improvement in the emergency management arrangements. Foremost of these is public expectation. The community expects better services from the public sector today, and emergency services are no exception. Indeed, in a complex and changing world, having the assurance and security of sound emergency services is fundamental to the proper functioning of the community. Police have responded to this imperative in other ways, with significant change to many of their services. This is another area where it is necessary to look at things differently.

Global warming and the prospect of an increase in frequency and magnitude of emergency events is another significant reason for change. While it is not possible to precisely predict the future in this area, it is not something which can be ignored.

A smaller state with more limited resources than others may find it challenging to make appropriate investments. However one particular risk in this area is that committees and networking are seen as a way of making things work. Collaboration and networking are important but they are not substitutes for appropriate and effective structures and systems.

The largest investment is not necessarily monetary; it is in a willingness to change. In this context, the close working relationships people have in Tasmania can be used to an advantage, by setting an aspiration of having ‘integrated and interoperable’ emergency management

arrangements. Establishing suitable arrangements at a state level would also provide a platform for managing change, not only to build contemporary emergency management capability, but to prevent and mitigate risk and develop community resilience. Funding may well be a problem to support change; however, failing to establish suitable arrangements would seem to the Inquiry to not be a suitable alternative.

Considering the principles of practical and effective emergency management, the assessments in various parts of the Report, the summary of difficulties in the operations for the fires and the comments above, the Inquiry recommends change to the concept of operations and the model applied for emergency management at a state level.

The emphasis is at the state level, as that is the principal level for managing significant emergencies like those that occurred on 4 January. For these emergencies, effective leadership is necessary for the community and for both within and across agencies and organisations. There needs to be clarity in authority, unity of purpose, unambiguous commitment, and coordination across response and recovery operations. Arrangements below this are then designed to integrate and operate effectively at lower levels of emergency. However, they should not be considered as secondary in importance, as capabilities should be imbedded as core business and complement emergency management operations at all levels.

There are differences in the emergency management arrangements in the various jurisdictions in Australia, some of which relate to the scale of the jurisdiction or the way emergency services are structured. Change is also occurring: for example, there is a white paper on Victorian Emergency Management Reform (the Victorian White Paper).¹

The Inquiry has not been able to develop a detailed emergency management model in the time available. However, the discussion below outlines some important elements for the way a model might be conceived; a broad model is then provided for consideration.

Victoria's example

Reference can be made to the Victorian State Emergency Response Plan (the Victorian Plan) to illustrate some features of an emergency management model and how it is intended to operate. Unlike the Victorian model (and South Australia's, too), in Tasmania there is no structured approach to coordinating response operations across agencies and organisations.

Extracts from the Victorian Plan are provided to indicate the policy positioning of this function, and the practical application of the models should be assessed within those jurisdictions (note changes proposed in the Victorian White Paper):

Principles of Response Planning and Operational Management

The Victorian Government's approach to any emergency, consistent with the philosophy adopted Australia-wide, is to ensure that:

- *Agencies, which are trained and equipped to provide a particular emergency response service, respond; and*

¹ Victorian Emergency Management Reform, Government of Victoria, December 2012.

- *Responding agencies are co-ordinated in their activities to counter the effects of the emergency and to meet the immediate needs of affected, or potentially affected, people and impacts upon the community as a whole.²*

Response Management Arrangements – Co-ordination

Introduction

Co-ordination involves the bringing together of agencies and resources to ensure effective response to and recovery from emergencies. The main functions of co-ordination are:

- *To ensure effective control has been established and maintained in response to an emergency.*
- *Ensuring effective information sharing, and*
- *The systematic acquisition and allocation of resources in accordance with the requirements imposed by emergencies.³*

Principal Roles of Emergency Response Co-ordinators

Emergency response co-ordinators at all levels are accountable to:

- *Ensure the appropriate control and support agencies are in attendance – or have been notified by the incident controller and are responding to an emergency*
- *Ensure effective control has been established by the control agency in responding to an emergency*
- *In consultation with the Incident Controller, ensure an Emergency Management Team has been formed ...*
- *Ensure the effective co-ordination of resources and services ...*
- *Arrange for the provision of resources requested by control and support agencies*
- *Ensure allocation of resources on a priority basis*
- *In the event of uncertainty, determine which agency is to perform its statutory response role ...*
- *Ensure the recovery co-ordinator has been notified ...*
- *Ensure timely information and warnings are provided to the community and support agencies by the control agency*
- *Consider registration of persons evacuated or otherwise affected*
- *Consider provision of relief needs ...*
- *In consultation with the control agency, consider the need for declaration of an emergency area*
- *Co-operate with participating agencies and authorities⁴.*

2 Victorian Emergency Management Manual, State Emergency Response Plan, at 3-2.

3 Victorian Emergency Management Manual, at 3-22.

4 Victorian Emergency Management Manual, at 3-23.

The Victorian White Paper proposes further reform. It is not expected the fundamental features of emergency management referred to above will be substantially changed, except for responsibility for coordination at the state level.

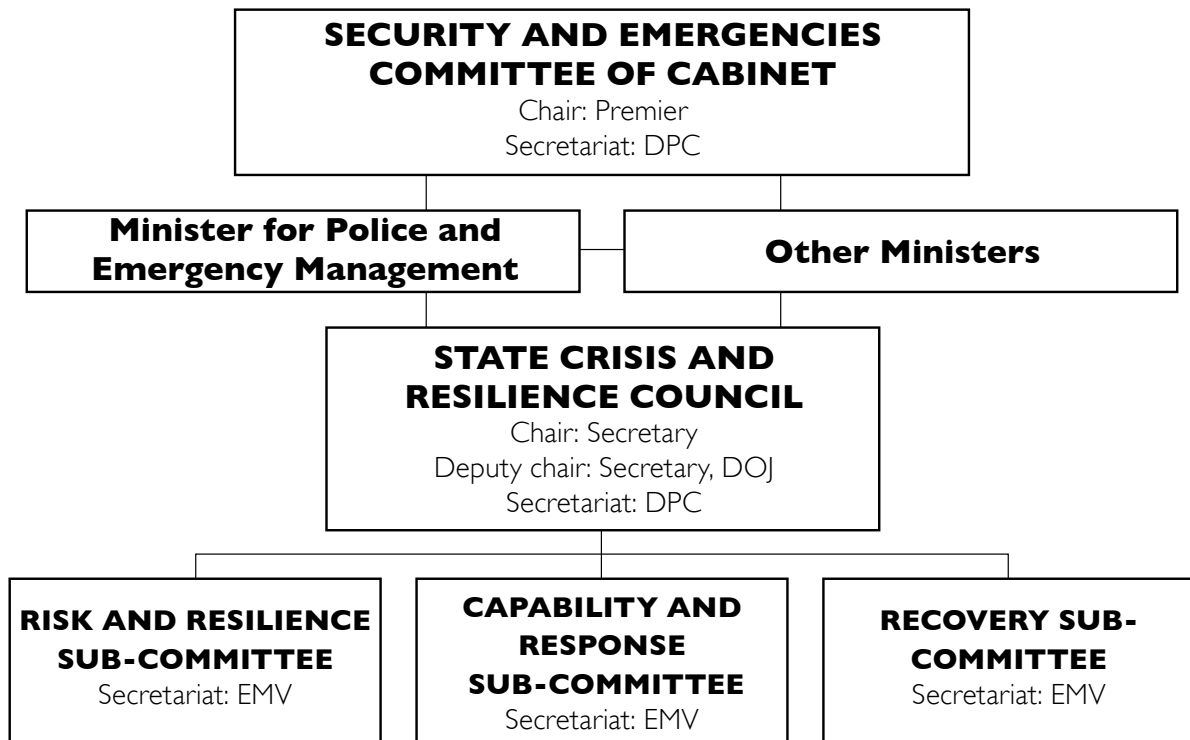
A schematic for the proposed state level management (not operational) structure in Victoria is provided at figure J.1.⁵

Figure J.1

Changes in this area are intended to streamline governance arrangements: to clarify roles and responsibilities, embed cooperation across agencies, and ensure emergency management reform is coordinated.⁶ The proposed Victorian State Crisis and Resilience Council is the equivalent of Tasmania’s State Emergency Management Committee. The three sub-committees are logical and, while nomenclature and detail on functions may vary, they are typical of emergency management arrangements.

Much of the proposed change in Victoria is within the public sector structures for emergency management services. It includes a new Emergency Management Commissioner to replace the existing Fire Services Commissioner and reflects the all-hazards approach to emergency management. It should be noted that in Victoria there are multiple fire agencies, and there is a need to integrate and coordinate emergency services across a larger and more complex scale than is the case in Tasmania.

The Inquiry has not examined the public sector structural arrangements relating to emergency services and does not make any recommendations about this. The Government may wish to consider whether there is any need for reviewing those arrangements.



5 Victorian Emergency Management White Paper, at p. 20.

6 Victorian Emergency Management White Paper, at p. 16.

Under the proposed Victorian reforms:

- the new Emergency Services Commissioner would be responsible for appointing a State Controller for any natural hazard emergency
- for terrorist or criminal incidents, police will be the control agency
- for other kinds of emergency, the State Controller will be nominated by the responsible agency in their plans
- in all major emergencies, except for police matters, the Emergency Services Commissioner will be responsible for ensuring that control of the response is effectively established and maintained.⁷ The Emergency Services Commissioner will be able to replace an Incident Controller and assume the role of Incident Controller if necessary. In the latter case the Commissioner needs to inform the Chief Commissioner of Police, who would undertake the role of the Commissioner in ensuring there is effective control for the emergency.

This arrangement is consistent with one of the responsibilities attached to the coordination role discussed by the Victorian Bushfires Royal Commission, which is currently with the Chief Commissioner of Police as the State Coordinator of their emergency management arrangements.

The point is that there is a means of ensuring that response operations are being effectively managed. Another point to note is that the Commissioner will also be responsible for leading the broader 'consequence management'. Consequence management can be construed to go further than recovery in dealing with the consequences of an emergency.

Victoria has three levels of emergency management; state, regional and municipal. A number of proposals may be relevant to a consideration of the model suitable for Tasmania. Police have had a coordination role at all levels in Victoria (refer to the extract from the State Emergency Response Plan above) and it is proposed that this would continue at the regional and municipal levels. However, it is proposed to change the municipal arrangements. Incident Controllers would be responsible for sourcing resources, not councils, and councils would not be required to maintain Municipal Emergency Coordination Centres.

Councils are considered important in the proposed Victorian emergency management model, for a range of emergency services, though only mitigation of risk is mentioned. The significant role councils play in engaging communities, building resilience and helping communities to plan for emergencies was acknowledged. The White Paper proposes that the role of councils in emergency management be reviewed.

These issues and proposals are relevant in considering the concept of operations for Tasmania.

⁷ Victorian Emergency Management White Paper, at p. 24.

A Tasmanian emergency management model

Taking all these matters into account, a suitable model for Tasmania may be as outlined in figures J.2 and J.3.

Figure J.2 State Emergency Management – Prevention and Preparation

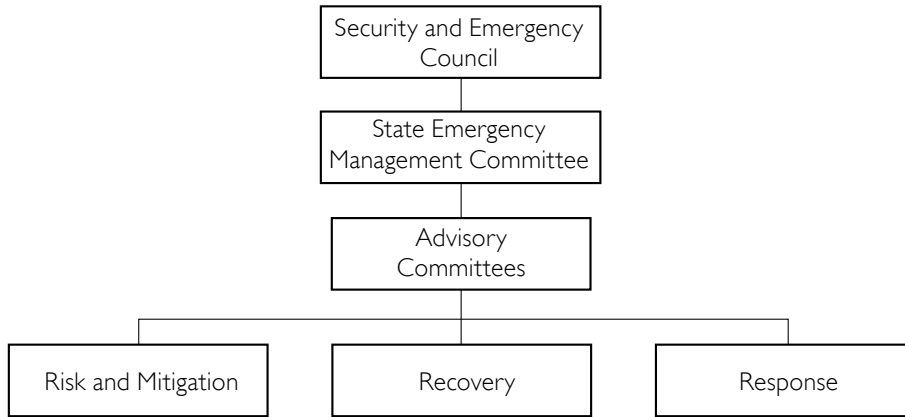
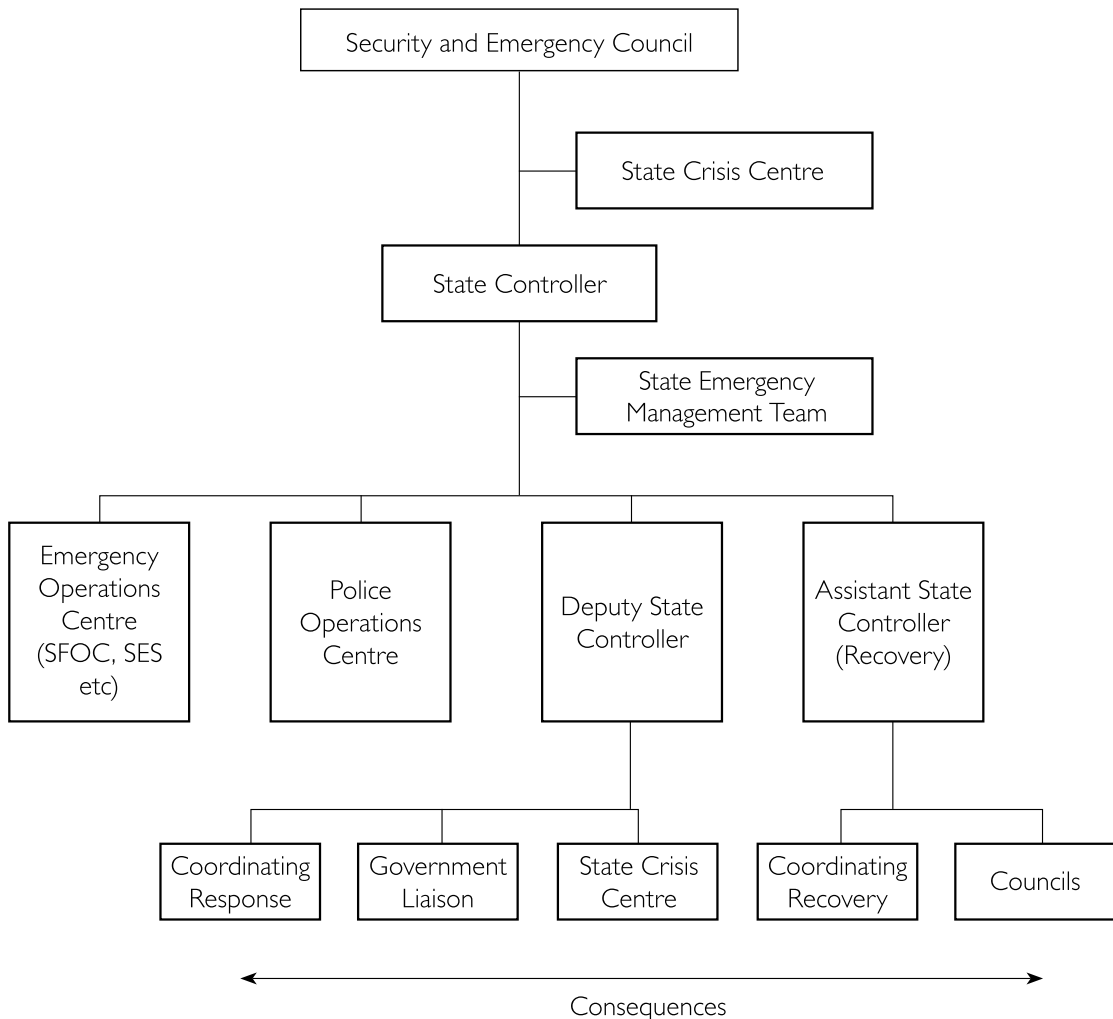


Figure J.3 State Emergency Management – Response and Recovery



The Inquiry is not in a position to propose a detailed and definitive explanation for the roles and responsibilities for each part of the arrangements set out in these structures. However, a brief explanation follows.

Security and Emergency Council

The concept is to create a standing Cabinet committee, chaired by the Premier, to deal with security and emergency management matters. In South Australia, this committee is called the Emergency Management Council; in Victoria, this is the Security and Emergencies Council. The combination of security and emergency management would seem to be appropriate.

This arrangement would provide leadership at times of emergency. It also reflects the priority and importance of security and emergency management across the Government sector, and policy and direction in all aspects of security and emergency management, including response and recovery.

State Emergency Management Committee

This committee should be chaired by the Secretary of the Department of Premier and Cabinet or the State Controller. Membership should be at the Secretary Chief Executive level. It would have a broader range of representation than is currently the case, including key community stakeholders.

The committee's mandate would be to lead all aspects of emergency management, except for response and recovery operations. A work program should be established to ensure that operational arrangements are implementation ready, including:

- creating facilities for those with response and recovery responsibilities to operate from
- establishing appropriate programs to prevent and mitigate risk
- ensuring community resilience is promoted and developed
- ensuring innovation and best practice are pursued.

Advisory Committees

These committees should be established at Deputy Secretary level to provide advice to the State Emergency Management Committee on the prevention and preparation aspects of emergency management. They should have no role in an emergency, and should not meet at a time and in a way which distracts operational commanders.

State Controller

The Police Commissioner should be appointed as the State Controller, as is presently done. The function performed by this person should be clearly defined and the authority of the position unambiguous, as should be the case for all key positions in response and recovery operations. It would not be expected that the State Controller would personally take charge of all operations. Rather the role would be to:

- ensure there is a single Incident Controller appointed for the type of emergency and that person is operating effectively
- ensure police and support arrangements are functioning effectively
- ensure that response and recovery operations are effectively coordinated
- make key policy and strategic decisions on response and recovery operations

- make a declaration of a major emergency
- appoint Deputy State Controllers and Assistant State Controllers (Recovery) (see below), either before or during an emergency
- give directions consistent with this role
- authorise the use of emergency powers before an emergency occurs
- lead the State Emergency Management Team (see below)
- attend the Security and Emergency Council (see above).

An important part of this arrangement is to define the 'trigger point' at which the authority of the State Controller should operate. There would need to be some basis on which to operate, but it should not be one which is bureaucratic, causes a lag in the continuity of operations or is ambiguous. The decision to initiate action is probably best left to a decision by the State Controller on the basis of some defined level of emergency.

Equally, it is important to identify when the role of the State Controller in an emergency should finish as well. This again, may be left to the decision of the State Controller. However, as response operations are likely to finish before recovery operations, there needs to be some arrangement to ensure responsibility and authority for recovery operations continues.

Suitable facilities for the State Controller to perform his or her role will need to be established.

Operations Centres

TASPOL, TFS, State Emergency Services and any other form of operation should be managed from suitable operations centres established for that purpose. For TASPOL, it would be expected that the operations commander at state level would be an Assistant Commissioner. Depending on the scale or type of emergency, the State Controller may wish to have the Deputy Commissioner take charge of police operations, and in that case an alternative Deputy State Controller would need to be appointed.

Deputy State Controller

This person would most likely be the Deputy Commissioner of Police, and the primary purpose of this person is to support the State Controller by performing functions which are likely to distract the State Controller from their primary purpose. An appointment of this person should occur before any emergency, and standing arrangement should be in place so that the functions for this position begin operating before a major emergency.

Functions envisaged for this position include:

- coordinating support to response operations
- coordinating activities with the Assistant State Controller (Recovery)
- liaising with the State Crisis Centre⁸
- liaising with relevant agencies and organisations
- attending committee meetings, if any are necessary

⁸ A location where whole-of-government emergency management policy and strategy is coordinated from during operations and/or exercise

- representing the State Controller as required
- relieving the State Controller in extended emergencies.

Suitable facilities for the Deputy State Controller to perform their role would need to be established.

Assistant State Controller (Recovery)

An appointment of this person should occur before any emergency, though change may be necessary depending on the type of emergency that occurs. It may be a senior police officer. However, it should be recognised that the appointment may need to continue beyond the response phase to an emergency.

This person would be responsible for controlling and coordinating recovery operations and for liaising with municipal councils to help with their functions in an emergency.

Suitable facilities for the Assistant State Controller (Recovery) to perform his or her role would need to be established.

State Emergency Management Team

The Victorian model has both a State Control Team and a State Emergency Management Team provided for in their State Command and Control Arrangements for Bushfire.⁹ Conceptually, it is a sound arrangement for the State Controller to have access to advice and support at the highest level. However, the Inquiry is not convinced that two groups are necessary, particularly as it is proposed in this model that the Deputy State Controller should support the State Controller. This aspect could be considered in the development of a suitable model for Tasmania.

Declarations

The issue of declarations of an emergency or state of disaster have been dealt with in PART E and a recommendation made there. When designing the mechanism for the declaration of emergencies and what consequences would flow from a declaration, care should be taken not to impede the build-up to managing an emergency — for example, by a declaration authorising the use of a particular plan or other action — as this may mean preparatory action is not taken until an emergency reaches a certain stage and this would create a lag in readiness to deal with the emergency.

Emergency Powers

The issue of emergency powers has been dealt with in PART E and a recommendation made there. Arrangements for the use of emergency powers should be made before an emergency occurs — for example, through a process of authorised officers — and they may be triggered by a declaration of emergency. However, it still may be necessary to have a mechanism for authorising emergency powers as required, depending on the type and form of an emergency.

Regional and Municipal (or Local) Levels

The emergency management arrangements below state level should be designed in a complementary way; and the number of levels, the responsibilities assigned to them, and the way they operate are important parts of the model for emergency management.

⁹ Victorian Emergency Management Manual.

A regional approach is established in the emergency management legislation and is institutionalised in the approach to emergency management in Tasmania. In considering what might be a suitable model at this level, it is imperative not to be inflexible and entrenched with the current arrangements, and to examine the issue objectively. In particular, the regional level should not be seen as a surrogate for the state level. Reasons for a state level have been outlined above, and they should be kept in mind when developing these complementary arrangements.

The first question to ask is how many levels are required? Each level will have transaction costs unless very efficient processes are developed for moving from one level to another in an emergency, and there will be other resource and cost issues in establishing facilities and systems. How the January 2013 fires emergency was managed clearly suggests that both state and regional levels are not required, at least with a very serious emergency. It is not imperative that there has to be three levels, though changes to the local level would be required if a two level arrangement is adopted. For example, South Australia has a two level structure: state and local. Considering the population and geography of Tasmania, a two level arrangement is probably also suitable.

At the municipal or local level, it appears to the Inquiry that there are deficiencies. The point has previously been made that councils cannot be expected to have responsibilities across the full range of emergency management. There are functions councils can perform, but there are limits when it comes to managing and coordinating response operations. Quite obviously there is then a potential gap in the arrangements at the local level.

In some other states, notably Victoria and South Australia, police have a role in coordinating response operations at a local or municipal level. There would be a number of benefits accruing from this approach:

- it could establish arrangements across the full range of emergency management
- it engages police more fully in emergency management and could be used to build police capability and develop a culture of emergency management
- it provides a structure on which to establish a greater readiness for emergency management at a local and a state level.

An independent review should be conducted to determine a suitable model for Tasmania and following that, legislative amendment made. Police and emergency services and other participants in the current emergency management arrangements would need to be closely involved. However, though willing to change, sometimes people can't see possibilities when they examine their own operations, so to ensure current arrangements are effectively challenged and objectively evaluated, the Inquiry recommends any review be independent.

Recommendation 100 – that the Department of Justice conduct an independent review to develop a suitable model for integrated and interoperable emergency management arrangements in Tasmania.

Recommendation 101 – that following any review, the Emergency Management Act 2006 be amended.



Photo courtesy of Jon Marsden-Smedley

PART K – CONCLUSION

The bushfires on 4 January 2013 were a significant emergency for Tasmania, especially the Forcett fire.

No person was killed by the fires, but there was substantial damage to property and the environment and economic, social and psychological harm to people and communities.

The fact that no person was killed should not simply be taken as an indication that the emergency management arrangements worked well. It is highly likely the preparedness of many people in the community and emergency warnings contributed to this outcome. In a number of respects the emergency management arrangements worked well. However, in a number of ways they did not.

Detailed comments have been made in the various parts of the report and it is not intended to summarise or repeat them in this conclusion.

Agencies and people with responsibilities for emergency management applied the model and the arrangements that were in place. However, these were not entirely suitable and not as ready for an emergency of this scale and complexity as they should have been. Moreover, there were some aspects of the emergency operations which can be improved.

To some extent, an emergency of this nature will test emergency management arrangements and find weaknesses. The conditions under which decisions are made in emergencies and the wisdom of hindsight also needs to be taken into account. Similarly, there will be ongoing developments in this field and arrangements will not always be up-to-date. Allowance has been made by the Inquiry for these factors in making judgements.

The emergency management arrangements can, and should, be improved to provide an appropriate level of protection and reassurance for the community. Many recommendations have been made for this purpose.

Two final comments and recommendations are necessary. First, resources need to be committed to improving the emergency management arrangements. Many of the problems are the result of not making these commitments in the past. To some extent as well, it may be a reflection of not having many significant emergencies in Tasmania, so that arrangements have either not been sufficiently tested or the management of emergencies has not been rigorously scrutinised. Nonetheless, resources should now be committed to undertaking the improvements needed.

Second, an independent means should be established to monitor and report on implementation of the approved recommendations, to ensure that appropriate action does occur.

Recommendation 102 – that resources are committed to developing and implementing approved reforms to the emergency management arrangements.

Recommendation 103 – that an independent means of monitoring and reporting on the implementation of approved recommendations is established.



Photo courtesy of Bernard Plumpton

