



A SHARED RESPONSIBILITY

THE REPORT OF THE PERTH HILLS BUSHFIRE FEBRUARY 2011 REVIEW



Perth Hills Bushfire February 2011 Review

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Perth Hills Bushfire Review 2011

Dear *Mal*

I am pleased to provide you with the report of the Perth Hills Bushfire Review 2011. I have called the report 'Shared Responsibility' to reflect mutual obligations to build community resilience against tragedies that hurt communities and damage property.

The 'Shared Responsibility' theme of the report highlights the areas where communities were informed and prepared for the bushfires; areas where the community formed its own collective response with the help of Local and State Government agencies; and areas where co-ordination across government agencies including volunteer bushfire brigades was required to effectively respond to the bushfires.

There have been a large number of previous reviews on bushfires in WA including a Parliamentary Review. Lessons were taken from these reviews and it was noted that not all previous recommendations had been acted upon despite the investment of time and money by government to improve capability in this area.

The seminal work on bushfires in Australia and drawn upon considerably in the preparation of this report is the 2009 Victorian Bushfires Royal Commission. One of the Royal Commissioners, Mr Ron McLeod AO had previously reported on the 2003 bushfires in Canberra and I acknowledge his assistance to me in my approach to this review.

The Perth Hills Bushfire Review 2011, referred to in this report as the 'Special Inquiry', was established as such under the provisions of s24H(2) of the *Public Sector Management Act 1994*.

The Special Inquiry applied the provisions of s24J(3) of the *Public Sector Management Act 1994* to conduct almost fifty hearings involving about 100 witnesses. Community Meetings and interviews provided the Special Inquiry with personal interactions to ensure that access was given to as many people as possible to inform the Special Inquiry.

The Special Inquiry has formed 55 Recommendations covering a broad range of areas for your consideration and that of the WA Government. The recommendations span several areas and each recommendation in the report is cross referenced to the Terms of Reference. These broad areas of the recommendation include:

- Previous work in WA on bushfires
- The current and projected impact of climate on bushfires in WA
- The ability of agencies to collect data and inform both Government and the Community about the threat of Bushfire and how to mitigate that threat
- The response to the Roleystone/Kelmscott fires with reference to other fires that destroyed parts of the Perth Hills over the weekend of 5 & 6 February 2011
- Shortcomings identified in the response and co-ordination across agencies including the volunteer organisations to the bushfires
- Governance around critical decision making, resource allocation and the policy framework that addresses bushfire risk mitigation and response
- Communication before, during and after a bushfire
- Possible solutions to improve governance and coordination into the future.

Significant power was afforded the Special Inquiry to conduct its review. The powers meant that the Special Inquiry could direct persons to appear before it and to provide documents. Limited use was made of those powers as it was clear to me that, for the most part, everyone involved was keen to cooperate and assist the Special Inquiry.

On that note, I was impressed at the calibre of witness from public sector agencies. They were professional, across their brief and had enlightened suggestions for the future. Unfortunately, the main agency with responsibility for bushfires in WA, the Fire and Emergency Services Authority appeared to struggle in their approach to the Special Inquiry. This is reflected in both the detail of the report and the recommendations that follow.

You afforded me a unique opportunity to attempt to discover better ways of approaching community, agency and policy coordination. I was extremely fortunate to meet with committed individuals like ordinary householders and volunteers who have given resilience to bushfire a lot of thought and invested even more in the personal contribution of their time to 'get things right'. These are extraordinary citizens of our community relying on government not so much to 'solve the problem' for them but to provide efficient and coordination responses when bushfires occur.

The Special Inquiry was extremely fortunate to have made available to it, the services of Mr Robert Cock QC whose advice was always precise and timely enabling this report to keep to its timetable.

The decision to conduct this Special Inquiry under the provisions of the *Public Sector Management Act 1994* enabled significant flexibility as opposed to other forms of review. In this regard I wish to place on record my utmost appreciation for the work and dedication of two officers from the Department of the Premier and Cabinet, M/s Belinda Van Sebille and Mr Stephen Hurley without whose assistance this report would not be made possible.

I would also like to acknowledge Charles Sturt University for allowing me the time to do this work and continue the University's commitment to study and research into emergency services.

There remains one question the answer to which eluded the Special Inquiry but it is an answer that requires further examination and that is: What is the measure of success of the outcome of a bushfire. Is the loss of no lives the only performance measure? If so, how many houses is an acceptable number to lose? Does one performance indicator have the potential to cloud the 'Shared Responsibility' of all to build resilience of our community?


M.J. Keelty AO APM
16 June 2011

Acknowledgements

This report has been made possible through the invaluable assistance and contributions made by two officers of the WA Department of the Premier and Cabinet - M/s Belinda Van Sebille and Mr Stephen Hurley. The report drew significantly from the work of the 2009 Victorian Bushfire Royal Commission and in this regard advice provided by Mr Ron McLeod AO is much appreciated. Mr Robert Cock QC afforded significant assistance by way of legal advice which is appreciated. Charles Sturt University is acknowledged for providing the opportunity to undertake this review. The residents of Roleystone/Kelmscott who provided the photographs in this report are also acknowledged for making a contribution in this way to the report. The residents afforded us extraordinary personal access which was respected and appreciated.

Cover: Photograph taken by Kelmscott resident Leissa Hanley

NOTE

Since the transmittal of the report on 16 June 2011, a number of errors were identified. With permission from Mr Mick Keelty APM AO, these errors were corrected and the report reprinted on 7 July 2011.

Recommendations

Recommendation 30

Incorrectly printed on p.117 without the work 'risk' between 'the' and 'posed' on the second line. Corrected with insertion.

Recommendation 36

Incorrectly printed 'Western Australian Policy' on pages 20 and 138. Corrected to 'Western Australian Police'.

Recommendation 39

Part C incorrectly printed on page 145. Corrected with the part C text of the recommendation on page 20.

In text

Page 91, line 1, 'atypical' incorrectly printed. Corrected with 'typical'.

Page 130, under Local Resources, line 6, 'that' incorrectly printed. Corrected with 'of' to read "impact and timing of these meetings..."

Page 132, quote from the FESA submission, line 4, incorrectly printed 'with'. Corrected to 'without' to read "occurred without the knowledge..."

Page 144, last paragraph, line 4, incorrectly printed 'for'. Corrected to 'from' to read "from the risk of bushfire".

Page 147, footnote 222 incorrectly attributed. Corrected with *Aberle, D – Hearing of Western Power, 4 May 2011*.

Page 150, footnote 222 incorrectly attributed. Corrected with *Aberle, D – Hearing of Western Power, 4 May 2011*.

Page 186, under Incident Controllers, line 2 of first point incorrectly printed 'ream'. Correct with 'team' to read "incident management team".

In addition, minor corrections, such as punctuation and formatting error were made in the reprint.

TABLE OF CONTENTS

Chapter 1: Introduction & Recommendations	3
1.1 Introduction	3
1.2 Submissions to the Inquiry	8
1.3 The Major Incident Review	9
1.4 Other Contributing Factors	11
1.5 List of Recommendations	14
Chapter 2: The History, Context and Governance	25
2.1 Previous Reviews of Bushfire Risk Management in Western Australia	25
2.2 Legislation	29
2.3 Declaration of Bushfire Prone Areas	31
2.4 Policies, Plans & Coordination	37
2.5 Emergency Management	43
2.6 Community Education	45
Chapter 3: Fuel Load and The Fire	55
3.1 Preceding Weather Conditions	55
3.2 Fuel Load: Assessment and Management	56
3.3 The Fire	81
Chapter 4: The Response	87
4.1 Attending the fire	87
4.2 Evacuations	117
4.3 Communication	122
4.4 Co-ordination	130
Chapter 5: The Impact	135
5.1 Measures of Success	135
5.2 People Displaced	136
5.3 Homes	139
5.4 Infrastructure	145
5.5 Insurance	154
Chapter 6: The Future	157

6.1 Bureau of Meteorology Predictions	157
6.2 Peri-Urban Dynamics.....	158
6.3 Shared Responsibility and Resilience.....	159
6.4 Structured Reviews.....	186
6.5 Implementation / The Way Forward	189
Annexure 1: Announcement of the Special Inquiry.....	191
Annexure 2: Appointment to Carry Out Special Inquiry.....	193
Annexure 3: Terms of Reference.....	194
Annexure 4: List of Submissions.....	196
Annexure 5: List of Hearings	201
Annexure 6: DEC Incident Escalation Report.....	207
Annexure 7: Incident Action Plan.....	208
Annexure 8: List of Acronyms.....	209

CHAPTER 1: INTRODUCTION & RECOMMENDATIONS

1.1 INTRODUCTION

On 6 February 2011 a bushfire destroyed 71 homes and damaged a further 39 homes in the Roleystone-Kelmscott area of the Perth Hills in Western Australia. To the great credit of all of those involved, residents and responding agencies alike, no lives were lost.

Having said that, many lives were affected forever by the fires as 517 families were evacuated from their homes¹. Unfortunately, some families were evacuated to three different locations as the extent of the fire became known adding to their trauma. The impact of losing your personal possessions and the personal trauma of experiencing the fires either as a resident, or member of a responding agency, cannot be quantified.

While there is no doubt about the priority of the *primacy of life*, the question arises whether the only measure of success in dealing with a bushfire is by counting the number of lives lost. Equally, counting 'houses' involved in the fires is very impersonal and overlooks the reality of the lives that people have created for themselves and their generations in a 'home'.

In response to these events, on 23 February 2011, the WA Premier, the Hon Mr Colin Barnett, announced the Perth Hills Bushfire Review in his capacity as both the Premier and the Minister responsible for the administration of the *Public Sector Management Act 1994*.

Subsequent to the announcement arrangements were made by the Public Sector Commissioner for the holding of a Special Inquiry pursuant to s24H(2) of the *Public Sector Management Act 1994* (Annexure 2).

The purpose of the Special Inquiry was to examine all aspects of bushfire risk management in the Perth Hills area in accordance with the Terms of Reference (Annexure 3) and to provide a report on findings and recommendations to the Public Sector Commissioner by 23 June 2011.

The Special Inquiry was afforded powers akin to those of a Royal Commission and persons summoned or appearing as a witness are treated in the same way and have the same protections as a witness in a case tried in the Supreme Court of WA.

¹ Information provided by the Department for Child Protection

By virtue of s24J(3) of the *Public Sector Management Act 1994*, the rules of evidence have no application and so the Special Inquiry was able to inform itself of matters as it saw fit. Information before the Special Inquiry was obtained in many ways; in written form, by way of submissions, written answers to specific questions and from relevant statements, reports, minutes of meetings, and correspondence; and from witnesses who came before the Special Inquiry and made oral statements and answered questions.

Although it was possible to do so, at no stage during the Special Inquiry was it felt that there was a need to require a witness to be sworn to answer questions on oath. In this report references to any information received from whatever source as evidence should be understood in this sense.

Hearings were conducted in a formal atmosphere with recording of the evidence subsequently transcribed, checked and offered to the witness to correct before being registered. The Hearings were conducted in a fashion more akin to a parliamentary inquiry, than a courtroom style hearing.

The majority of Hearings took place at the WA State Co-ordination Centre in West Leederville, however, a series of Hearings were conducted in a meeting room at the Frye Park Pavilion in Kelmscott. A Hearing was also conducted with staff from the City of Armadale at their offices. The significant assistance and co-operation with the Special Inquiry by the City of Armadale is very much appreciated.

Between 9 March 2011 and 20 May 2011, the special inquiry held almost 50 hearings involving close to 100 witnesses.



Clifton Hills Resident Steve Marshall gives evidence before the Special Inquiry on 6 May 2011

Two public meetings were held at the Armadale Arena during March 2011 and several focus group meetings were held in the Perth Hills local government areas during April and May 2011.

In addition to Hearings and meetings conducted in WA, meetings were also held in Melbourne, Sydney and Canberra with various fire agencies, reviewers of previous fires including the 2009 Royal Commission into the Victorian Bushfires, and a private sector representative who had developed an early warning system for bushfires. Interviews were conducted with a wide range of institutions who have an interest in the outcomes of the Special Inquiry or who have conducted work either through research, policy or planning directly related to bushfires such as:

- the CSIRO
- University of Western Australia (UWA)
- WA and local government agencies
- the Insurance Council of Australia
- the Bushfire Co-operative Research Centre (Bushfire CRC)
- the Australian Fire and Emergency Services Agency (AFAC)
- the Real Estate Institute of Western Australia (REIWA)
- insurance companies
- the NSW Rural Fire Service
- the Victorian Fire Commissioner
- the Victorian Rural Fire Chief.

The Special Inquiry appreciates the time these agencies gave especially when some were not directly affected by the actual fires.

The Special Inquiry drew heavily upon the work of the 2009 Victorian Bushfires Royal Commission and the 2006 Community Development and Justice Standing Committee Report on its *Inquiry into Fire and Emergency Services Legislation*. The Special Inquiry also considered the 2006 Council of Australian Governments (COAG) *Response to the National Inquiry on Bushfire Mitigation*².

Additionally, the Special Inquiry considered the COAG *National Strategy for Disaster Resilience* dealing with building the nation's resilience to disaster and released in 2010.

Another external source of valuable material for consideration by the Special Inquiry was the *Coroner's Inquests into the London Bombings of 7 July 2005*. While not immediately apparent, the findings in this report by the Honorable Lady Justice Hallett DBE traverse areas of significant importance when dealing with the response of fire authorities. The report deals at length with the response by the London Fire Brigade and other emergency services to the incident. In particular, the report looks at:

- the use of the Computer Aided Despatch or CAD System (also used in WA by FESA)
- inter-agency training between emergency services
- declaration of Major Incidents and
- operational discretion used by the London Fire Brigade.

The Special Inquiry also made reference to a speech by former High Court Judge, the Honorable Michael Kirby who presented a paper to the 2010 Conference meeting of the Australasian Fire and Emergency Service Authorities Council (AFAC)³. The Special Inquiry was interested in the developments around liability especially in regard to knowledge that an area is prone to bushfire attack and not taking precautionary action as either a resident, a town planner, a local government or other person or entity who has a responsibility for fuel load.

There had already been a number of previous reviews into bushfires in Western Australia and these are further addressed in Chapter Two.

During the Special Inquiry, two summonses were issued under the provisions of s241 of the *Public Sector Management Act 1994* to obtain documents from the WA Fire

² The National Inquiry on Bushfire Mitigation and Management was commissioned by COAG in 2004 and the report referred to here is the 2006 response to the recommendations that followed

³ The Hon Michael Kirby AC CMG (2010) *After the Fires Die Down and the Lawyers Depart*

and Emergency Services Authority (FESA). These were the only summonses issued and were issued in one instance to obtain minutes of the FESA Board meetings which are otherwise protected under the provisions of the *Fire and Emergency Services Authority of Western Australia Act 1998*(FESA Act); and the other incidence was in order to obtain a copy of the draft Major Incident Review (MIR) of FESA's response to fires in the Perth Hills and Lake Clifton during the early part of 2011.

The references to the 'Draft MIR' referred to throughout this report is the version made available to the Special Inquiry through the service of that summons on 9 May 2011. Any comments by the Special Inquiry about the MIR should be viewed with that in mind.

The latter summons was issued in order to obtain the document in a timely fashion to enable alignment with the Special Inquiry's program of Hearings which were delayed pending the appearance of FESA witnesses in anticipation of the receipt of the MIR.

While it is normal for witnesses to seek legal advice prior to appearing before this type of Special Inquiry, it did become obvious during the course of the Special Inquiry that FESA witnesses were discussing their evidence and appeared to have prepared answers. Suffice to say that in the eyes of the Special Inquiry, this practice diminished the credibility of some witnesses and their evidence.

Further, the Special Inquiry became aware of some recent activities by FESA Management aimed at predicting the outcomes of the Special Inquiry. While these activities give the appearance that FESA was proactive in addressing some issues, there remain aspects of FESA's operations that require significant attention and these are further discussed in Chapters 4 and 5.

Outside of the formal processes, informal visits and discussions took place and the staff of the Special Inquiry appreciated the generous embracement and support provided by many people who were directly affected by the bushfires.

The Special Inquiry staff were given a rare opportunity to gain insight into the personal experiences and impact on the lives of those who lost their homes, saved their homes or fought the fires. It is for this reason that the decision was made to only include photographs in this report that were taken by the residents themselves⁴. The support of the residents in compiling this report is a tribute to their sense of community and their commitment towards a 'shared responsibility' to build future resilience.

⁴ With the exception of a photograph taken of the hearings held in Kelmscott on 6 May 2011

1.2 SUBMISSIONS TO THE INQUIRY

The public submissions to the Special Inquiry closed on 15 April 2011 and a total of 101 submissions were received.

The decision to set 15 April 2011 as the closing date for public submissions adversely impacted upon the Special Inquiry. When taking into account the 2011 Easter break most of the material and witnesses to be examined by the Special Inquiry had to take place in the six weeks from the beginning of May 2011 to the printing deadline of mid June 2011. This may be a consideration for future inquiries where public submissions are sought.

A template for submissions was placed on the website of the Special Inquiry and was largely followed with some notable exceptions. The public submissions fall into several broad categories:

- Residents directly affected by the Roleystone-Kelmscott bushfires on 6 February 2011
- Members of the public not affected by this fire but who had experienced previous bushfires or were experienced in fighting bushfires
- Lobby groups and Interest groups who have an interest in bushfire and/or local government regulation
- Commercial operators who had developed equipment or products to assist with bushfires
- Serving members of FESA or Volunteer Bush Fire Brigades (VBFB)
- State Government agencies
- Local Government.

The Special Inquiry was provided with a number of maps, DVDs, photographs and publications in support of submissions.

A list of Submission is at Annexure 4.

The Special Inquiry did not have the time, nor expertise, to examine the commercial products referred to it as part of the public submissions. Arrangements were made to forward these submissions to FESA and the commercial operators were advised accordingly.

Many of the people who provided public submissions touched upon the same or similar areas of concern. Several people were chosen to appear in a hearing to discuss their submission.

It is felt that those issues raised in the public submissions and relevant to the terms of reference were adequately addressed during the course of the Special Inquiry. FESA provided the largest submission. In total, with follow up material, the FESA submissions were in excess of 1000 pages. The majority of this material had to be specifically sought by the Special Inquiry because unfortunately, the original FESA submission did not follow the template provided by the Special Inquiry despite an undertaking to do so given by the FESA CEO at a Hearing on 29 March 2011.

The initial FESA submission stood out as not adding significant value to the Special Inquiry and was more in the style of self promotion and gratuitous advice rather than a constructive address of the terms of reference. Indeed, parts of the FESA submission were found to be inaccurate or untrue as will be discussed in later chapters. The Special Inquiry found this regrettable and was concerned about the amount of resources used to prepare the Submission.

Several witnesses who came forward to the Special Inquiry asked not to be identified. Provision to protect the identity of witnesses was made in the Premier's announcement of the Special Inquiry⁵. However, it was noted that written public submissions may not be afforded the same protection and so a warning to this effect was provided with the template for submissions on the Special Inquiry website. It is regrettable, but it is a fact, that some witnesses feared retribution from those in authority for having assisted the Special Inquiry. The culture of fear and intimidation felt not only by volunteer firefighters but also by residents is examined further in Chapters 3 and 4.

1.3 THE MAJOR INCIDENT REVIEW

At the commencement of the Special Inquiry questions were asked as to whether FESA would be reviewed. The Special Inquiry took the view that to properly address Terms of Reference number 1, 4 and 5, an examination of FESA was not only appropriate, but very necessary. It became evident during the course of the Special Inquiry that this was a critical and correct decision as evidenced in later chapters. Prior the announcement of the Special Inquiry, FESA engaged Mr Stuart Ellis AM to conduct a Major Incident Review (MIR).

It is normal practice that operational agencies be they Defence, Police or similar type organisations review their performance following a major incident. Mr Ellis is highly regarded in the Emergency Services industry and was a consultant to the Victorian Royal Commission. His qualifications are beyond dispute and the Special Inquiry appreciated the co-operation provided in ensuring that the two reviews operated in a way so as not to disrupt the WA emergency services agencies from their very important day to day activities.

⁵ Annexure 1

The MIR sought to identify strengths and weaknesses in the operational response to three major bushfires in January and February 2011, including the Roleystone-Kelmscott fire on 6 February 2011. The draft MIR made 14 findings and 14 recommendations, some of which were not consistent with the information presented to, or findings of, the Special Inquiry. Points of difference are discussed throughout this report.

Having said that, the Special Inquiry learned that the MIR did not consult the volunteer brigades who attended not only the Roleystone-Kelmscott fires but the other fires that were the subject of the MIR. Understandably, because the MIR was looking at Lake Clifton, Red Hill and Roleystone fires there may have been a limit to the depth of penetration of the review on any one fire.

Had the MIR engaged with the volunteer brigades in more detail, which may not have been within its remit, it would have discovered anomalies that the Special Inquiry finds difficult to reconcile. For example, there were allegations of panic and lack of planning in the Major Incident Team about which the Special Inquiry received specific evidence that is covered in Chapter 4. The MIR would also have learned that a volunteer brigade was redirected from the Roleystone fire to a 'scrub' fire at Ferndale where its 12,000 litre water tanker was not utilized for the 36 hours it was directed to remain at Ferndale. This event is covered in detail in Chapter 4.

The draft MIR makes the point that:

...With residents not in place to extinguish the initial ember attack that so often develops into a burning house...the outcome is becoming inescapable⁶.

This observation becomes vital as the Special Inquiry heard evidence from residents who remained behind to fight the fires and in fact saved their homes. A lingering doubt exists as to who made the right decision on the day which is discussed with a recommendation in Chapter 4.

Wholesale evacuation does not necessarily build resilience. It is important for the future that the experiences of those who chose to remain and protect their homes be reconciled with the choices and decisions about who and where to evacuate made by the authorities.

A key piece of infrastructure lost in the fires impairing a more efficient response from the attending emergency services not familiar with the district was the Buckingham Bridge on the Brookton Highway at Kelmscott.

⁶ Ellis, S (2011) *Major Incident Review* (9 May 2011 draft) Unpublished Work, p.5

The draft MIR makes the point that :

The Buckingham Bridge was identified as key infrastructure, but was subsequently lost⁷.

This assertion is not supported by the evidence as is discussed in Chapters 4 and 5.

The reason for pointing out these examples is to acknowledge that the Special Inquiry received evidence from a broad range of witnesses whose credibility and evidence is accepted. It is important to make the point to anyone attempting to reconcile the MIR with this report.

Having said that, the Special Inquiry appreciated the expert focus of the MIR and agrees with its Finding number 13 that FESA comply with its own internal policies of completing post incident reviews within six weeks⁸. At the time of writing of this report, the MIR remains a draft more than four months since the last fire that was subject to review by the MIR. As mentioned in Chapter 6, the extended period taken to resolve the MIR does not auger well.

1.4 OTHER CONTRIBUTING FACTORS

Two areas focused upon by the Special Inquiry that were not necessarily obvious at the time the Terms of Reference were prepared are changes in climate and community resilience.

The Special Inquiry received evidence from the WA Regional Office of the Bureau of Meteorology (BOM). The BOM provided significant data to suggest that the Perth Hills and the immediate area are undergoing significant climate change when viewed over a thirty year period. This is further discussed in Chapter 2 but it is highly relevant to Term of Reference 1 in terms of preparations for the future.

Some recognition should be given to the changes in climate that might require a new approach to prevention against bushfires. The 2009 Victorian Royal Commission gave consideration to the issue of a changing climate, but there are other unique challenges for the Perth Hills that also need considering.

The Special Inquiry had the benefit of also taking into account the recently released Climate Commission Report which addresses the issues in more scientific detail but supports the evidence given to this Special Inquiry by staff of the BOM.

⁷ Ibid., p.21

⁸ Ibid., p.58

The Climate Commission report notes,

The average temperature at the Earth's surface has continued to increase. The global combined land and sea surface temperature (SST) for 2010 was 0.53 °C above the 1961-1990 average (WMO 2011) and thus 2010 ranks amongst the three warmest years on record⁹.

The warming of the earth's surface will have the potential to impact directly upon fuel loads and their management into the future and while not a term of reference the Climate Commission's Report appears compelling,

The evidence that the Earth is warming on a multi-decadal timescale, and at a very fast rate by geological standards, is now overwhelming¹⁰.

The Special Inquiry makes the point that there must be a limit to the time that it has taken for governments at the State and Local level to act upon the reality of climate change and reflect this reality in town planning and building approvals. In his address to the 2010 AFAC Conference, the Hon Justice Kirby makes the point in respect to Black Saturday 2009 when he said:

The great lesson of the examination of Black Saturday 2009 is that hard decisions have to be made. And those decisions must address systemic problems. They must limit individual freedoms where to pursue them will repeat the path of danger and expose the State and its personnel to unreasonable risk¹¹.

Chapters 5 and 6 discuss in more detail the need to recognise and distinguish those who are prepared for bushfire and those who are not. **But the first step is to recognise that changes to our climate can be the catalyst to reform legislation and policy as they apply to the Perth Hills.**

Building community resilience was also not a specific term of reference for the Special Inquiry, however, the shared responsibility between government agencies both at the State and Local levels needs to be matched by a shared responsibility embraced by the community.

⁹ Climate Commission (2011) *The Critical Decade: Climate Science, Risks and Responses*

¹⁰ Ibid., p.21

¹¹ Kirby, op.cit., p.22

Just as a chain is only as strong as its weakest link, so is a community living in a bushfire prone area only as safe as its least prepared residence. As the National Strategy for Disaster Resilience noted,

In the past, standard emergency management planning emphasised the documentation of roles, responsibilities and procedures...we (now) need to focus more on action-based resilience planning to strengthen local capacity and capability, with greater emphasis on community engagement¹²

There seems to be a tension between evacuation on the one hand and informing and educating a community including the preparation of 'fire ready' plans, on the other. Statements were made to the Special Inquiry by residents who were concerned about the futility of plans they had made when the order to evacuate gave them little or no opportunity to test their resilience. Equally, not one agency appearing before the Special Inquiry could point to engagement of the community during exercises designed to test the response to a bushfire emergency.

As the National Strategy for Disaster Resilience noted,

Fundamental to the concept of disaster resilience, is that individuals and communities be more self-reliant and prepared to take responsibility for the risks they live with (sic)¹³

The Special Inquiry received many examples of evidence where this shared responsibility was practised. The details of these cases are discussed further in Chapter 5. The point remains that where the community decides to live in a bushfire prone area and takes on a responsible approach in support of that decision, some recognition and engagement needs to occur not only in terms of shared responsibility, but importantly, 'shared understanding'. Some residents are clearly more resilient and better prepared than others.

Finally, there will be events such as bushfires or cyclones or floods where the force of nature is such that it is beyond good governance, good preparation and indeed, human intervention to prevent.

At the opposite end of the scale is 'learned helplessness' where a community sits back and expects government to provide **all** the answers.

Evidence given to the Special Inquiry suggests that there were some extraordinarily courageous actions taken by firefighters and residents alike.

¹² National Emergency Management Committee (2010) *National Strategy for Disaster Resilience*, p.2

¹³ *Ibid.*, p.10

The Special Inquiry has identified the actions of a number of individuals that should be recognised more formally. There already exists a spirit of 'shared responsibility' in the Perth Hills – it simply needs further development and harmonisation through improved relationships and better coordination.

The Victorian Royal Commission noted and it is repeated in the paper presented by the Hon Justice Kirby:

It should be recognised that some places are too dangerous for people to live..... and development should be strongly discouraged in those areas¹⁴.

While this was a reference to a different part of Australia, the Special Inquiry remains concerned that rebuilding to previous standards in the Roleystone-Kelmscott area was supported by the City of Armadale because there is no legislation in place to prevent residents from doing so. The Special Inquiry hopes that this decision is never regretted.

The recommendations of the Special Inquiry make it clear that there is some way to go to improve the response from all quarters to face the next bushfire in the Perth Hills. **It will take courage to implement the recommendations of this report but change needs to occur if another disaster is to be averted.**

1.5 LIST OF RECOMMENDATIONS

Recommendation 1 (TOR 5)

The Fire and Emergency Services Authority and the Department of Environment and Conservation develop and finalise their Memorandum of Understanding and commit to working in partnership.

Recommendation 2 (TOR 5)

Emergency Management Western Australia establish an inter-agency working group to continue the development of the new single emergency services Act.

Recommendation 3 (TOR 2 and 3)

The State Government transfer responsibility for declaring bushfire prone areas from local government to the Western Australian Planning Commission. The Western Australian Planning Commission should urgently assess those areas that should be declared bushfire prone.

¹⁴ Kirby, op.cit., p.20

Recommendation 4 (TOR 2 and 3)

The State Government give legislative effect to the *Planning for Bush Fire Protection Guidelines*.

Recommendation 5 (TOR 2 and 3)

Local Government recognise the work of the Gas Technical Regulatory Council and ensure any amendments to the Australian Standard are enforced.

Local Government provide information to residents on any changes to the Australian Standard relating to tethering gas tanks and encourage property owners to take action to comply with the Standard.

Recommendation 6 (TOR 4)

The Fire and Emergency Services Authority, in partnership with local governments, conduct more focused pre-season bushfire education, which emphasises:

- Water supply is not guaranteed during a bushfire
- Power supply is not guaranteed during a bushfire
- Saving life will be a priority over saving property so expect to be evacuated
- Once evacuated, access to affected areas may not be possible for several days
- Water ‘bombing’ by aircraft cannot be guaranteed in bushfire
- SMS warnings are advice only and may not be timely.

Recommendation 7 (TOR 4)

The Fire and Emergency Services Authority (FESA) review its distribution of information material, including *Prepare. Act. Survive*. FESA should also consider including the community in pre-season exercising, in consultation with the Department for Child Protection and local governments.

Recommendation 8 (TOR 4)

Local governments continue to include information on bushfire risk and preparedness with rates notices.

Recommendation 9 (TOR 4)

The Fire and Emergency Services Authority work in partnership with the Real Estate Institute of Western Australia to develop a package of information for new residents moving into bushfire prone areas, and a process to ensure this information is provided through real estate agents.

Recommendation 10 (TOR 4)

The Department of Education oversee the provision of bushfire education in schools that are located in bushfire prone areas, ensuring that **all** schools in these areas incorporate key bushfire messages in their curriculum.

Recommendation 11 (TOR 4)

The Fire and Emergency Services Authority consider alternative wording to Total Fire Ban that ensures people gain a more complete understanding of what actions are prohibited.

Recommendation 12 (TOR 4)

The Fire and Emergency Services Authority work in partnership with Main Roads Western Australia and local governments to develop and implement a comprehensive strategy for the use of mobile variable message boards to alert the community to the declaration of a total fire ban and what it means.

Recommendation 13 (TOR 1)

The State Government consider resourcing the Department of Environment and Conservation and local governments to develop and administer a comprehensive prescribed burning program in Perth's urban/rural interface to compliment DEC's existing landscape-scale program.

Recommendation 14 (TOR 1)

The Fire and Emergency Services Authority, the Department of Environment and Conservation and local governments take proactive steps to conduct their prescribed burning programs as joint exercises. This will give effect to:

- Reducing fuel load
- Improving inter-operability
- A mutual understanding of the fire fighting techniques of each agency.

Recommendation 15 (TOR 1)

The Fire and Emergency Services Authority and local governments ensure that the ability to:

- measure and map fuel loads
- maintain fuel load databases
- draw up prescriptions for, and oversee controlled burns

are included as key competencies in any future recruitment of Chief Bushfire Control Officers and Community and Emergency Services Managers.

Recommendation 16 (TOR 1 and 3)

The State Government give its full support to the Western Australian Local Government Association's *Send to Solve* initiative.

Recommendation 17 (TOR 1 and 3)

Local governments consider increasing the number of green waste collections carried out each year to encourage a more proactive approach to property (and vegetation) maintenance by residents.

Recommendation 18 (TOR 1 and 3)

The Western Australian Local Government Association explore the feasibility of local governments utilising aerial and satellite imagery to monitor firebreaks and fuel loads on private property.

Recommendation 19 (TOR 1)

The State Government reaffirm its 2009 decision to approve DEC exercising greater flexibility in managing smoke within national guidelines, in order to achieve its prescribed burn program.

Recommendation 20 (TOR 1)

The Fire and Emergency Services Authority, the Department of Environment and Conservation and local governments closely monitor the research and development of alternative fuel reduction techniques to ensure that the most efficient and effective programs are adopted.

Recommendation 21 (TOR 1 and 5)

The Fire and Emergency Services Authority, the Department of Environment and Conservation and local governments jointly develop a single, integrated system for fuel load assessment and management.

The system should enable public access to allow members of the community to access information about the fuel load in a given locality.

Recommendation 22 (TOR 1 and 5)

The State Government ensure that the continued development of the Fire and Emergency Service Authority's Integrated Bushfire Risk Management System is dependent on an independent comparative assessment of its functionality and cost-effectiveness against the Spatial Support System used by the Department of Environment and Conservation.

Recommendation 23 (TOR 1 and 5)

The Interagency Bushfire Management committee develop and oversee a work program to:

- conduct site specific assessments to assess current fuel loads
- assess, analyse and prioritise bushfire risk on land within and adjacent to communities
- develop a three year rolling mitigation works program with annual implementation and review.

This work should commence independently of any decision on the most effective online integrated system. All data collected should be uploaded to the SLIP.

Recommendation 24 (TOR 4)

The Fire and Emergency Services Authority convene a facilitated debriefing session between the families who remained behind to protect their properties, and the incident controllers.

This session should include open discussion and explain the decisions of all parties – including how the incident controllers determined priorities, and why residents chose not follow their advice to evacuate.

The learning outcomes should be promulgated across all agencies and incorporated in future level 3 incident controller training programs.

Recommendation 25 (TOR 5)

The Fire and Emergency Services Authority immediately comply with the provisions of WESTPLAN BUSHFIRE and formally declare incidents at their appropriate level and document and communicate those decisions in a similar way to the systems used by the Department of Environment and Conservation and the Western Australian Police.

Recommendation 26 (TOR 5)

The Fire and Emergency Services Authority develop formal procedures for mandating the completion of Incident Action Plans, ensuring the documents are detailed and that they record critical decision making.

Recommendation 27 (TOR 5)

The Fire and Emergency Services Authority review its use of the Australian Interagency Incident Management System to ensure that the most appropriate resources (including aerial resources) are used to respond to an incident. If resources are rejected during an incident either through the decision making process or other grounds, the reason for the decision should be documented.

Recommendation 28 (TOR 5)

The Fire and Emergency Services Authority (FESA) review its program to decommission vehicles and ensure that when such vehicles are offered during an incident that FESA staff adhere to FESA's own policy of 'Use of Private Vehicles in Fires'

Recommendation 29 (TOR 5)

The Fire and Emergency Services Authority and the Department of Environment and Conservation ensure that their Incident Controllers identify critical infrastructure as part of their initial assessment and preparation of Incident Action Plans when attending major incidents.

Recommendation 30 (TOR 1 and 2)

Main Roads Western Australia undertake more frequent examinations of its bridges located in areas prone to bushfire and ensure that the risk posed to loss of infrastructure in a fire is understood by local authorities.

Recommendation 31 (TOR 5)

The Fire and Emergency Services Authority and the Western Australian Police ensure they receive all necessary legal clarification in relation to *Bushfire Responsibilities of Police Officers – Powers Used in Assisting Fire Authorities in Responding to Bushfires*, to be promulgated across FESA and WAPOL.

Recommendation 32 (TOR 4 and 5)

The Western Australian Police and the Fire and Emergency Services Authority jointly examine the Traffic Management System developed in response to the 2009 Victorian bushfires and seek its adaptation to use in WA with additional attention to the access and egress by bona fide residents to areas that are evacuated.

Recommendation 33 (TOR 4)

The Fire and Emergency Services Authority and the ABC commence a thorough review of emergency warning messages. This review should give consideration to:

- The content, structure and presentation of emergency warning messages
- Media access to the Incident Management Team and State Operations Centre.

This review should be expanded to include other media organisations should they demonstrate a willingness and capacity to contribute.

Recommendation 34 (TOR 4 and 5)

FESA develop in partnership with other emergency service agencies a 'one source: one message' multi layered system similar to that recommended by the Victoria Bushfire royal Commission.

Recommendation 35 (TOR 4 and 5)

FESA and local governments jointly review radio communications capability prior to the 2011/12 bushfire season with a view to improving the current delivery of service to firefighters.

Recommendation 36 (TOR 4 and 5)

The Department for Child Protection, the Western Australian Police and the Fire and Emergency Services Authority develop improved arrangements for communicating the loss of home and possessions to persons gathered at evacuation centres with a view to increasing privacy.

Recommendation 37 (TOR 4 and 5)

Hazard Management Agencies overseeing the response to incidents on the urban fringe select evacuation centres that are well within the urban environment and unlikely to be impacted by the incident.

Recommendation 38 (TOR 1 and 3)

Local governments institute a comprehensive program to assess fuel loads and bushfire preparedness on private properties. The program should give reference to the creation and maintenance of a Building Protection Zone, in line with FESA guidelines.

This program should be implemented and managed under the *Bush Fires Act 1954* in a manner similar to the fire break inspection program.

Recommendation 39 (TOR 2 and 3)

State and locals governments:

- a) recognise that regardless of future declarations of bushfire prone areas, the existing planning and building problems in the Perth Hills related to bushfire risk will persist;
- b) urge residents in these areas to retrofit their homes and evaporative air conditioners in compliance with AS 3959 - 2009;
- c) examine options to retrospectively bring these areas into compliance with *Planning for Bushfire Protection Guidelines*.

Recommendation 40 (TOR 2)

The State Government mandate that the title deeds for relevant properties be amended to indicate if the property is in a declared bushfire prone area.

Recommendation 41 (TOR 2)

Western Power and the Water Corporation continue to work collaboratively to assess options to better protect the power supply to water pumping stations in bushfire prone areas.

Recommendation 42 (TOR 1)

The State Government recognise the projected changes in climate and potential impact on future fire events.

Recommendation 43 (TOR 5)

The State Emergency Management Committee amend State Emergency Management Policy 4.1 (*Operational Management*) to:

- give clear and explicit direction about when and how an incident should be declared
- clearly articulate the actions to be taken
- clearly define accountabilities
- provide detailed criteria for elevating issues and engaging other agencies.

Recommendation 44 (TOR 5)

The State Government amend section 50 of the *Emergency Management Act 2005* to allow the Chair of the State Emergency Coordination Group to declare an emergency situation.

Recommendation 45 (TOR 5)

Emergency Management Western Australia and the State Emergency Management Committee amend WESTPLAN-BUSHFIRE to require State Emergency Coordination Group meetings to be held at the State Coordination Centre in West Leederville.

Recommendation 46 (TOR 5)

The State Government restructure the Fire and Emergency Services Authority as a Department.

As part of this restructure, Emergency Management Western Australia should either be:

1. clearly separated from the fire and emergency services response function (see figure 2); or
2. moved to the Department of the Premier and Cabinet (see figures 3 and 4) or
3. moved to the Attorney-General's department (see figures 3 and 5).

Recommendation 47 (TOR 5)

Emergency Management Western Australia develop mechanisms to calculate the estimated total cost of a fire to the community.

Recommendation 48 (TOR 5)

The State Government move the responsibility for the management and distribution of the Emergency Services Levy to the Department of Finance.

Recommendation 49 (TOR 5)

Emergency service agencies undertake more consultation and joint exercising involving the Fire and Emergency Services Authority, the Department of Environment, the Western Australian Police, the Department for Child Protection, local governments and volunteers – including Volunteer Bush Fire Brigades.

This should include field exercises which test:

- Evacuation centres
- Critical infrastructure (including at the local level)
- Traffic management, including road blocks.

Consideration should also be given to involving the community in exercising (see Recommendation 7) and using prescribed burns as exercises (see Recommendation 14).

More detailed planning for exercises should be included in a revised WESTPLAN-BUSHFIRE to be endorsed by the State Emergency Management Committee.

Recommendation 50 (TOR 5)

The State Government transfer responsibility for the installation, removal, maintenance of fire hydrants to the Water Corporation, in accordance with the recommendations of the 2006 CDJSC *Inquiry into Fire and Emergency Services Legislation*.

Recommendation 51 (TOR 5)

The Water Corporation immediately review the outstanding orders for hydrant repairs and develop strategies to reduce the backlog.

Recommendation 52 (TOR 5)

The Fire and Emergency Services Authority and local governments ensure that Community Emergency Service Managers are physically based in local government.

Recommendation 53 (TOR 1 and 5)

The Fire and Emergency Services Authority and local governments examine the current competencies of Chief Bushfire Control Officers and Community Emergency Services Managers (or Community Fire Managers) and consider what further development is needed to ensure these staff are capable of:

- measuring and mapping fuel loads
- maintaining fuel load databases
- drawing up prescriptions for, and overseeing controlled burns
- building effective working relationships with all relevant stakeholders.

Recommendation 54 (TOR 5)

The Interagency Bushfire Management Committee develop a consistent program of education, training (including media), testing and review of Level 3 Incident Controllers.

This should include provision for a formal review of the performance of individual Level 3 Incident Controllers after **every** incident.

Recommendation 55 (All Terms of Reference)

The State Government review implementation of the Special Inquiry's recommendations in two years.

CHAPTER 2: THE HISTORY, CONTEXT AND GOVERNANCE

2.1 PREVIOUS REVIEWS OF BUSHFIRE RISK MANAGEMENT IN WESTERN AUSTRALIA

The Special Inquiry considered the findings of a number of previous reviews of bushfire risk management and emergency preparedness in Western Australia, including:

- *Report of the Ministerial Working Group investigating the Darling Escarpment Fire Hazard* (1994)
- Auditor General– *Performance Examination – Responding to Major Bushfires* (2004)
- Community Development and Justice Standing Committee – *Inquiry into Fire and Emergency Services Legislation* (2006)
- Department of the Premier and Cabinet – *Review of Western Australia’s Bushfire Preparedness* (2009)
- Auditor General performance examination – *Coming Ready or Not: Preparing for Large-Scale Emergencies* (2009)
- Euan Ferguson – *A Review of the Ability of the Department of Environment and Conservation Western Australia to Manage Major Fires*(2010).

The 1994 *Report of the Ministerial Working Group investigating the Darling Escarpment Fire Hazard*¹⁵ reviewed the standard of fire prevention and operational preparedness within the Perth Hills area and reported on the vulnerability of the hills area in relation to fire hazard. This included:

- examining the ability of the range of services to cope in an emergency fire situation and the town planning and building code regulations as they relate to fire prevention
- assessing the level of public awareness about fire prevention, planning and evacuation
- identifying ways fire hazards can be reduced and levels of public awareness and planning increased.

The Working Group found that the management of bushfire related issues in the area needed significant change. It paid specific attention to increasing the involvement of local governments in fire prevention activities and community awareness and education; and recommended that planning guidelines for bushfire prevention be reviewed and then made mandatory through legislative change. The

¹⁵ Day, J (Chair) (1994) *Report of the Ministerial Working Group investigating the Darling Escarpment Fire Hazard*

Special Inquiry strongly agrees with this recommendation as noted in Recommendations 3 and 4.

The 1994 Working Group recommended introducing a system to allow for the control of burning by permits all year and developing a strategic plan to overcome water supply problems in the event of a loss of electricity supply to water pumping stations. It also recommended improvements to warning and information systems and evacuation and emergency planning. **The Special Inquiry was presented with similar issues.** It is important that the outcomes of reviews are followed through and that progress is audited.

In 2004 the Auditor General examined how well prepared the State was to deal with major bushfires in the south west land division of WA. The Auditor General reviewed the coordination across fire fighting organisations, and the planning and other preparations needed to support bushfire fighting operations. In his report *Performance Examination – Responding to Major Bushfires*¹⁶ the Auditor General found that organisational arrangements for fighting major bushfires needed to be better coordinated, and fire fighting organisations needed to be better prepared.

The Auditor General recommended the Government establish a State-wide common structure across volunteer bush fire brigades to more effectively manage the coordination of personnel and resources and recommended emergency management legislation be established which clarifies State and local government responsibilities.

The Auditor General also noted that risks associated with major bushfires are increasing, including due to changes in land use due to urban sprawl, with housing estates extending into bushfire prone areas. He also noted higher fuel levels are contributing to an increased level of risk.

The 2006 Community Development and Justice Standing Committee (CDJSC) *Inquiry into Fire and Emergency Services Legislation*¹⁷ examined fire and emergency services legislation in WA and presented 88 recommendations to Government. This included recommending three Acts be repealed to create a single Emergency Services Act and this is discussed further in 2.2.

The CDJSC also recommended the Fire and Emergency Services Authority (FESA) be empowered to take control of a fire from local government or CALM (now the Department of Environment and Conservation (DEC)) in specific circumstances, including where the fire is a multi-agency incident and State-level control is required,

¹⁶ Auditor General Western Australia (2004) *Performance Evaluation: Responding to Major Bushfires* Report Number 7

¹⁷ Community Development and Justice Standing Committee (CDJSC) (2006) *Inquiry into Fire and Emergency Services Legislation* Report No.3 in the 37th Parliament

or is threatening life or property. Legislative changes to this effect were enacted in 2009.

Many of the issues addressed by the CDJSC align closely with issues addressed by the Special Inquiry, including the role of local government in maintaining bush fire brigades; changing FESA's status from that of an authority to a department; and addressing long-standing issues relating to the ownership and maintenance of fire hydrants.

The CDJSC also considered the effectiveness of the Emergency Services Levy (ESL). The ESL is a levy on all properties and the funds collected are used to support emergency services across Western Australia. The ESL is discussed further in Chapter 6.

The findings of the CDJSC are largely supported by the Special Inquiry and are discussed throughout this report.

The 2009 Department of the Premier and Cabinet (DPC) *Review of Western Australia's Bushfire Preparedness*¹⁸ determined that Western Australia is well placed to respond to bushfires with well established plans and arrangements and strong relationship between the agencies and organisations involved. However the Review Committee identified areas of concern and made recommendations to further improve the State's bushfire preparedness and capability.

This included amendments to legislation recommended in the CDJSC Inquiry which have since been enacted and revisions to WESTPLAN–BUSHFIRE which have also been completed. The Review Committee noted agencies would consult at the start of each season on fuel reduction priorities in high risk areas and prepare a State level strategic prescribed burning policy.

The 2009 Review Committee also recommended FESA assess the cost and other implications of proposed changes to bushfire prone zone declarations which would allow the whole State to be declared bushfire prone.

The 2009 Auditor General performance examination *Coming Ready or Not: Preparing for Large-Scale Emergencies*¹⁹ reviewed the State's preparedness for emergencies and considered whether Western Australia has an emergency management framework and plans in place to manage emergencies, particularly large scale emergencies.

¹⁸ Department of the Premier and Cabinet (2009) *Review of Western Australia's Bushfire Preparedness*. Report by Review Committee

¹⁹ Auditor General Western Australia (2009) *Coming, Ready or Not: Preparing for Large-Scale Emergencies* Report Number 7

The Auditor General found gaps in the implementation of WA's emergency framework including WESTPLANS which had passed their review date, gaps in emergency management regulations and a lack of definition of roles in State emergency management policies. The Auditor General also found that six hazards, including bushfire, did not have a specified hazard management agency. WESTPLAN–BUSHFIRE, which is discussed in 2.3 below, has since been redrafted. The Auditor General also recommended that the State Emergency Management Committee and Emergency Management WA:

- work with local governments to ensure up-to-date comprehensive local arrangements are in place
- ensure agencies have a common or compatible crisis information management system in place
- ensure all agencies use the same approach to managing incidents.

The Special Inquiry recognised that the DPC Review and Auditor General performance examination were more recent (2009) and it was comfortable with the recommendations of each report. However it was clear to the Special Inquiry that deviation from well thought through and structured plans has created problems. This is discussed further in Chapter 4.

In 2010 the Minister for Environment commissioned the Chief Executive Officer of the South Australian Country Fire Service, Euan Ferguson, to review the Department of Environment and Conservation's preparation, planning, response and recovery in respect of major bushfires and strategies for the evaluation and management of bushfire threat and risk. The review also considered the management structure command and control arrangements, training and resources, communication and coordination arrangements with other fire management agencies, and equipment and public information strategy. The review by Mr Ferguson was conducted in response to a recommendation made by the State Coroner in his findings into the death of three people in the 2007-08 Boorabin fires.

In his report *A Review of the Ability of the Department of Environment and Conservation Western Australia to Manage Major Fires*²⁰, Mr Ferguson concluded that DEC had a sound capability and capacity for managing fire on its estate in Western Australia, but also made a number of observations highlighting areas for improvement.

This included pre-fire season exercising for pre-formed incident management teams; enhancements to DEC's incident management capability, including through the use of deputy incident controllers; including FESA officers in pre-formed teams; providing

²⁰ Ferguson, E (2010) *A Review of the Ability of the Department of Environment and Conservation Western Australia to Manage Major Fires*

additional guidance to Level 3 incident controllers; and using the Interagency Bushfire Management Committee to develop and strengthen future bushfire strategies and common systems of work between bushfire management agencies in WA.

The Report also noted that a draft Memorandum of Understanding (MOU) between DEC and FESA had not been signed and that this would provide a valuable statement of joint commitment between the two agencies. The Special Inquiry found no evidence that this MOU had been finalised.

Recommendation 1

The Fire and Emergency Services Authority and the Department of Environment and Conservation develop and finalise their Memorandum of Understanding and commit to working in partnership.

The relationship between FESA and DEC is discussed in more detailed in later chapters.

2.2 LEGISLATION

The key pieces of legislation which govern bushfire risk management and fire response in WA are:

- *Emergency Management Act 2005*
- *Fire and Emergency Services Authority Act 1998*
- *Bush Fires Act 1954*
- *Fire Brigades Act 1942*
- *Conservation and Land Management Act 1984.*

FESA is currently progressing work to repeal the *Bush Fires Act 1954*, the *Fire Brigades Act 1942* and the *Fire and Emergency Services Authority Act 1998* and to create one comprehensive Emergency Services Act. This is in response to the 2006 CDJSC Inquiry into fire and emergency services legislation discussed above (2.1) and will provide a single piece of legislation which recognises and supports the interoperability of fire services. The Special Inquiry was concerned that the work on this legislation is being conducted 'in house' by FESA. Given the findings of previous reviews discussed in this chapter and in particular the emphasis placed upon coordination of interagency responses outlined in Chapter 4 of this report, the Special Inquiry considered it important that the development of new legislation be collaborative.

Recommendation 2

Emergency Management Western Australia establish an inter-agency working group to continue the development of the new single emergency services Act.

The *Emergency Management Act 2005* provides for prompt and coordinated organisation of emergency management in the State. It establishes emergency management responsibilities and governance arrangements and provides the legislative basis for the emergency management plans discussed further in 2.3. The Act also provides that a hazard management agency (in this case FESA) can make an *emergency situation* declaration in respect of the hazard it is managing (section 50) and the Minister for Emergency Services can make a *state of emergency* declaration (section 56). The Act sets out the powers available to authorised persons during an emergency situation or state of emergency (sections 67-69; 72; and 74-75).

The *Bush Fires Act 1954* outlines obligations with respect to fire and the powers that may be exercised by the combating authorities, local government, FESA and DEC. It provides for the declaration of total fire bans and prohibited burning times and allows local governments to require landowners to clear fire breaks. The Act also empowers local governments to establish and maintain bush fire brigades. There are currently 593 brigades in WA, comprising 26,192 members²¹.

Under s.13 of this Act, FESA can assume control of a fire. This change was enacted in response to the 2006 CDJSC report discussed at 2.1. Using Section 13, FESA can appoint a bush fire liaison officer or authorised person (and commonly known as the incident controller) to take control of all operations in relation to a fire. When this appointment is made, all bushfire control officers, DEC officers and bush fire brigade members at the fire are subject to and are to act under, the authorised person's orders and directions. The application of this authority during the Roleystone-Kelmscott fire proved to have a significant impact on the allocation and deployment of resources. This is discussed in Chapter 4.

The *Fire Brigades Act 1942* was enacted to consolidate and amend the law relating to the prevention and extinguishing of fires, the confining and ending of hazardous material incidents and the protection of life and property from fire, hazardous material incidents and accidents. The Act provides FESA with operational responsibility for bushfires inside gazetted fire districts.

The *Fire and Emergency Services Act 1988* establishes FESA as a statutory government authority with functions relating to the provision and management of

²¹ Submission of the Fire and Emergency Services Authority, p.6

emergency services. FESA's functions relating to emergency services as defined in the Act (section 11(2)) are:

- a) *advising the Minister on all aspects of policy in relation to emergency services;*
- b) *developing plans for, and providing advice on, the management and use of emergency services;*
- c) *undertaking, coordinating, managing and providing practical and financial assistance to activities and projects relating to emergency services*

The Act also sets out specific functions relating to the State Emergency Service, the Volunteer Marine Rescue Services and FESA units. FESA currently has 1,200 staff²², including 919 Fire and Rescue service firefighters on shift at fire stations²³. It is responsible for 88 Volunteer Fire and Rescue Services (2,250 members), 65 State Emergency Services units (1,914 members), 33 Volunteer Marine Rescue Service groups (1,360 members), 16 Volunteer Emergency Service units (542 members), and 9 Volunteer Fire Services brigades (359 members)²⁴.

In establishing FESA as an authority, the Act establishes the FESA Board as the governing body (s.6(2)). The FESA Board comprises 13 members specifically appointed to represent emergency service stakeholder groups. FESA is managed by a Chief Executive Officer who, '*subject to the control of the Board*' (s.19), administers the day to day operations of FESA. **This arrangement is discussed in detail in later chapters and impacted directly upon FESA's Submission to the Special Inquiry.**

The *Conservation and Land Management Act 1984* was enacted to make better provision for the use, protection and management of certain public lands and waters and the flora and fauna thereof. Under the Act, DEC manages more than 26 million hectares of land, including national parks, conservation parks, regional parks, State forest, timber reserves and nature reserve. DEC has a statutory responsibility for fire management on these lands and in 2003 was also given fire preparedness responsibility for a further 89 million hectares of unallocated crown land and unmanaged reserves in the State (managed in accordance with section 33(2) of this Act)²⁵.

2.3 DECLARATION OF BUSHFIRE PRONE AREAS

Under the *Local Government Act 1995* local governments may declare all or parts of their local government area to be a 'bushfire prone area'. A designated bushfire

²² Ibid., p.6

²³ Follow up information provided by the Fire and Emergency Services Authority – 26 May 2011

²⁴ Submission of the Fire and Emergency Services Authority, p.6

²⁵ Submission of the Department of Environment and Conservation, p.1

prone area is defined under the National Construction Code (formerly known as the Building Code of Australia) Performance Requirement P2.3.4 (Class 1 buildings) as *land designated under a power in legislation as being subject, or likely to be subject to, bushfires.*

Under the Construction Code, areas designated bushfire prone are required to meet a set of performance requirements. These requirements can be met through compliance with Australian Standard AS3959-2009²⁶. AS3959-2009 prescribes construction standards for residential buildings based on an assessment of Bushfire Attack Levels (BAL) linked to expectant radiant heat exposures generated by site characteristics.

The requirements for the construction of buildings in bushfire prone areas specified in AS3959-2009 aim to improve resistance to bushfire attack from burning embers, radiant heat, flame contact and combinations of the three attack forms. Some witnesses appearing before the Special Inquiry were concerned that a declaration of a bushfire prone area would mean building standards would have universal application. This is not true as the exact construction requirements to be used depend on an assessment of the BAL – **this means that while a property may be in a declared bushfire prone area, the requirements will not automatically apply unless the property is assessed at a certain BAL.**

Simply being in a bushfire prone area does not on its own demand all construction standards be met. For example, properties assessed as having a low BAL will not be subject to additional construction requirements, while those assessed as having a BAL of 12.5 will only need to comply with some of the additional construction requirements .

AS3959-2009 includes specific requirements for evaporative cooling units designed to prevent ember attack.

The Special Inquiry found that despite there being a high level of awareness in local governments of the requirements of AS3959-2009, **only two areas in Western Australia had actually been declared bushfire prone** and therefore compulsorily require compliance with AS3959-2009. Some other local government areas encourage its use while others have included it in amended town planning schemes.

²⁶ Standards Australia AS3959-2009 *Australian Standard Construction of buildings in bushfire-prone areas*

Mr Ian MacRae, the Executive Director of Development Services at the City of Armadale told the Special Inquiry on 15 March 2011:

... the approach we have tried to adopt is that we are trying to encourage people to be aware of 3959 and how they can design their house as to take account of best practice.

Compliance with AS3959-2009 can also be required through local regulations, for example to apply in a town planning scheme. Local Governments²⁷ are given the authority by section 3.8 to confer standards issued by Standards Australia on their local areas.

The Special Inquiry recognises that there would be additional construction costs for those properties in bushfire prone areas assessed as having a Bushfire Attack Level of 12.5 or higher and these were identified to the Special Inquiry by FESA as follows:

Table 1: Cost of compliance with 2009 AS 3959²⁸

Category of bush fire attack	Predicted bushfire attack and levels of exposure	Base house	Large two story	Elevated light weight construction
BAL – low	Insufficient risk to warrant specific construction requirements.	\$0	\$0	\$0
BAL – 12.5	Ember attack.	\$11,535	\$14,981	\$21,428
BAL – 19	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux.	\$11,535	\$14,981	\$21,428
BAL – 29	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux.	\$15,471	\$17,095	\$35,024

²⁷ via by-laws and regulations made pursuant to the *Local Government Act 1995*

²⁸ Costs of compliance taken from the Submission of the Fire and Emergency Services Authority p. 251 – extracted by FESA from a larger comparative table and taken from the February 2009 Australian Building Codes Board publication the '*Final Regulatory Impact Statement for Decision (RIS 2009-02)*'. Information on predicted bushfire attack and levels of exposure taken from *Australian Standard AS3959-2009 Construction of Buildings in Bushfire Prone Areas*, p.35

Category of bush fire attack	Predicted bushfire attack and levels of exposure	Base house	Large two story	Elevated light weight construction
BAL – 40	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux with the increased likelihood of exposure to flames.	\$17,107	\$19,751	\$62,357
BAL – FZ	Direct exposure to flames from fire front in addition to heat flux and ember attack.	\$20,885	\$28,905	\$76,679

These costs are broadly consistent with evidence provided by the Department of Commerce.

The Victorian Bushfires Royal Commission²⁹ considered the impact of planning and building laws and regulations in some detail and noted that:

Although it is not possible to guarantee that any building will survive a bushfire, particularly a ferocious one, the Commission considers that there are some areas where the bushfire risk is so high that development should be restricted³⁰.

The Commission found that:

where people live, the standard of the buildings in which they live, how those standards are maintained and, therefore, building and planning controls are crucial factors affecting safety in a bushfire³¹.

The Commission recommended a suite of changes to the Building Code of Australia AS3959-2009 and planning and building arrangements³², some of which have since been implemented.

²⁹ 2009 Victorian Bushfires Royal Commission (2010), *The 2009 Victorian Bushfires Royal Commission – Final Report - Summary*, Government Printer for the State of Victoria, p.13-15

³⁰ Ibid., p.13

³¹ Ibid., p.13

³² Ibid. – see Recommendations 37 to 55

The Special Inquiry heard there may be a reluctance from some local governments to declare bushfire prone areas as the subsequent requirements and increased costs could have the potential to limit development in their area. In its Submission³³ FESA said:

Some local governments have cited potential for increased liabilities, lowering property prices, insurance issues and potential developers viewing the imposition of additional construction standards as a disincentive to invest in their area as reasons for not exercising this power.

The Special Inquiry understands FESA, the Department of Planning and the Building Commission Division within the Department of Commerce are working together with other stakeholders to provide advice to Government on legislative reform options for the declaration of bushfire-prone areas. FESA suggested that declaring the whole State as prone to bushfire risk would be a simple and effective way to apply a more accurate and consistent identification of bushfire prone areas³⁴, however evidence to the Special Inquiry showed that this was not supported.

In the absence of more widespread declaration of bushfire prone areas and application of AS3959-2009 in the State, FESA and the Western Australian Planning Commission have developed *Planning for Bush Fire Protection Guidelines*³⁵. The guidelines set out issues which need to be addressed at various stages of the planning process in order to provide an appropriate level of protection to life and property from bush fires. The guidelines were first developed in 2001 and the latest edition was released as *interim guidelines* in 2010.

FESA and the Department of Planning are reviewing the guidelines in light of the findings of the Victorian Bushfires Royal Commission. The interim guidelines provide detailed advice to assist people who plan, regulate or provide advice as part of the land development process to ensure fire protection is integrated early in the development process and across all levels of planning decisions and proposals.

The Special Inquiry heard evidence that while the guidelines were supported by State Planning Policy, there is no head of power to enforce them. This means local governments have discretion as to how they interpret the guidelines and whether they adopt them in their planning schemes and local regulations.

The Special Inquiry took the time to discuss the guidelines with a number of witnesses. The guidelines are fully supported by the Special Inquiry and it is considered that their implementation as compulsory requirements would go a long

³³ Submission of the Fire and Emergency Services Authority, p.250

³⁴ Ibid., p.251

³⁵ Western Australian Planning Commission, Department of Planning and the Fire and Emergency Services Authority (2010) *Planning for Bush Fire Protection Guidelines* Edition 2

way towards risk mitigation and better preparation for all future developments in the Perth Hills. Once the process of review is finished, and feedback from local government incorporated where appropriate, the guidelines should be given legislative authority.

Recommendation 3

The State Government transfer responsibility for declaring bushfire prone areas from local government to the Western Australian Planning Commission. The Western Australian Planning Commission should urgently assess those areas that should be declared bushfire prone.

Recommendation 4

The State Government give legislative effect to the *Planning for Bush Fire Protection Guidelines*.

The Special Inquiry also considered the impact of gas tanks attached to houses, or located in close proximity to house. The Department of Commerce gave evidence to the Special Inquiry about the behaviour of gas tanks during the fire. On 5 May 2011 Mr K Bowron, Executive Director of Energy Safety noted:

. . . the issue is, with bottled gas, of the tanks falling over, which means that their safety mechanisms don't work properly. It's a condition called bleve, which is an explosive reaction to liquids boiling . . . In this particular fire, a few gas tanks did fall over. The vast majority of tanks worked exactly as they should: they got hot; they vented. Those venting gases can ignite, so they are like a blow torch at that stage, but that is usually when there's a large fire there anyway, so it's no additional safety concerns. A few fell over and ruptured from that point of view, none disastrously so. They did break up, but they didn't cause any particular concerns.

While this evidence suggests gas tanks did not actively contribute to the fire, the Special Inquiry was concerned by footage of the fire which showed gas tanks exploding and witness reports about the impact of gas tanks igniting.

The Special Inquiry heard evidence that the Gas Technical Regulatory Council is currently examining the issue of tethering gas tanks. This work may lead to a recommendation to amend the Australian Standard. A revised Australian Standard would not address the risk presented by gas tanks in existing properties as it would not apply retrospectively.

Recommendation 5

Local Government recognise the work of the Gas Technical Regulatory Council and ensure any amendments to the Australian Standard are enforced.

Local Government provide information to residents on any changes to the Australian Standard relating to tethering gas tanks and encourage property owners to take action to comply with the Standard.

2.4 POLICIES, PLANS & COORDINATION

Community Emergency Services Manager program

During evidence to the Special Inquiry, FESA provided information on its Community Emergency Services Manager (CESM) program. The program is administered through a Memorandum of Understanding between FESA and individual local governments on a cost-sharing basis. There are currently 20 CESMs servicing 24 local government areas with the following key responsibilities³⁶:

- *Contributes to the strategic direction and management of volunteer fire services as part of the District Management Team and implements agreed programs within Local Government(s);*
- *Implements and supervises the delivery of preparedness, prevention, response and recovery services at an operational level within Local Government(s);*
- *Facilitates the mitigation of fire impact on the community through the coordination of a range of strategies in partnership with the community, Local Government(s) and Bush Fire Brigade volunteers; and*
- *Fosters effective and professional working relationships between FESA, Local Government(s), other agencies and stakeholders.*

CESMs report jointly to FESA and local government.

The Shire of Mundaring³⁷ provided the Special Inquiry with information on its involvement in the program. The Shire of Mundaring employs a Community Fire Manager (CFM). The CFM in Mundaring is also appointed as the Chief Bush Fire Control Officer.

While acknowledging the merits of the CESM program, and successes in some areas, the Special Inquiry was concerned that the program may not represent a genuine partnership between FESA and local government. Evidence was given to

³⁶ Submission of the Fire and Emergency Services Authority, p,18

³⁷ Submission of the Shire of Mundaring

the Special Inquiry that FESA used the program to advance its own cause, making new equipment available to local governments conditional upon accepting the CESM program. If this is true, then it may represent an abuse of power by FESA which will undermine both the intent and delivery of the CESM program. This is discussed further in Chapter 6.

State emergency management policies and plans

The *Emergency Management Act 2005* provides for the establishment of State emergency management policies and State emergency management plans – known as WESTPLANS. The review and development of both the policies and plans sit with the State Emergency Management Committee³⁸ and the Committee is supported in this role by Emergency Management Western Australia (EMWA). EMWA currently sits within FESA. This positioning of EMWA is of concern to the Special Inquiry and is discussed in Chapter 6.

The State emergency management plan for bushfires is known as WESTPLAN-BUSHFIRE³⁹. The current plan was approved by the State Emergency Management Committee in December 2010 and is due for review in December 2015. Appendices to the plan are expected to be reviewed annually. **Should the Special Inquiry's recommendations be accepted by Government, it may be more appropriate to conduct an immediate review of WESTPLAN-BUSHFIRE.**

WESTPLAN-BUSHFIRE prescribes the management arrangements, responsibilities and procedures for State Government agencies and organisations involved in bushfire prevention, preparedness, response and recovery. This includes defining operational principles for bushfire risk management, outlining responsibility and accountability for management of bushfire risk treatments and reporting of performance, and outlining bushfire suppression coordination, control and command arrangements. The responsibilities of FESA, DEC and local governments are specifically defined.

Section 1.7 requires the plan to be exercised annually, with the plan to be integrated into relevant agency training programs. The Special Inquiry heard that exercising was limited, and primarily focused on desktop exercises. Desktop exercises limit the level of lateral thinking and dynamic decision making that is demanded in a real incident. This is discussed further in Chapter 6.

³⁸ State Emergency Management Committee (2009) *Review and Development of State Emergency Management Policies* - State Emergency Management Policy No 2.1; State Emergency Management Committee (2008) *Review and Development of State Emergency Management Plans* – State Emergency Management Policy 2.2

³⁹ State Emergency Management Committee (2010) *State Emergency Management Plan for Bushfire* (WESTPLAN-BUSHFIRE)

Section 4.3 sets out the levels of response which apply to bushfires. This includes 'principles in support of response arrangements' which define the operation of Level 3 incident management teams (IMTs):

- *IMTs will consist of a mix of agency personnel selected according to skills, knowledge, experience and availability.*
- *IMTs must include personnel with local knowledge.*
- *Level 3 IMTs must include a Deputy Incident Controller, Safety Advisor and Public Information Officer.*
- *Level 3 IMTS must be led by an endorsed L3 Incident Controller, where practicable, unless otherwise determined by the HMA or controlling agency.*

These principles also require that:

Incident Controllers will explicitly declare every incident level (1, 2 or 3)⁴⁰

Appendix 6 to WESTPLAN-BUSHFIRE defines the operational priorities which apply during response activities. These priorities reflect an explicit focus on protection of life (discussed further below) and highlight the importance of incident action plans:

- *The safety of personnel tasked to the incident will be the first priority in all phases of incident management.*
- *A second priority for Incident Action Planning will address the protection of community members and keeping them informed⁴¹.*

The third and fourth priorities relate to the protection of critical infrastructure and community assets; and the protection of conservation and environmental values. This is followed by aggressive attack on new outbreaks, seeking out and incorporating all relevant local knowledge in incident management teams, strong leadership and communication by the incident controller, and **resourcing an effective Incident Action Plan**. Unfortunately, the Incident Action Plan requirement was not followed in the Roleystone-Kelmscott fires as discussed in Chapter 4.

⁴⁰ Ibid., p.19

⁴¹ Ibid., p.36

The State Emergency Management Plan for the Provision of Welfare Support is known as WESTPLAN-WELFARE⁴². WESTPLAN-WELFARE prescribes the arrangements for the provision of welfare support services during emergencies. This includes:

- prescribing the organisation, concepts, responsibilities, mechanisms and procedures for all organisations involved in the delivery of emergency welfare support services
- outlining the structure for the coordination of emergency welfare support services, including resources, during emergencies
- establishing the principles for planning for the provision of welfare support at the State and Local levels.

WESTPLAN-Welfare was activated during the Roleystone-Kelmscott fire and this is discussed further in Chapter 5.

The implementation of emergency management plans is supported by a number of State emergency management policies.

The purpose of State Emergency Management Policy 4.1 (SEMP 4.1) *Operational Management*⁴³ is to ensure all emergency management agencies share a common understanding of the principles and structures used in emergency management in Western Australia. The response structures defined in SEMP 4.1 are discussed further below (2.5).

SEMP 4.1 also reinforces the need to determine an operational level for an incident and broadly defines the characteristics of each incident level.

State Emergency Management Policy 4.7 *Community Evacuation* provides guidance on the planning for and conduct of community evacuations in Western Australia⁴⁴. It emphasises the importance of planning for evacuation and requires that suitable refuge sites and welfare centres be identified and documented in Local Emergency Management Arrangements. It also defines the range of evacuations which may occur during an emergency:

- In the case of 'voluntary evacuations', community members should be provided with timely and relevant information to enable them to recognise a threat and make an informed decision about whether to relocate.

⁴² State Emergency Management Committee (2009) *State Emergency Management Plan for the Provision of Welfare Support* (WESTPLAN-WELFARE)

⁴³ State Emergency Management Committee (2010) *Operational Management – State Emergency Management Policy 4.1*

⁴⁴ State Emergency Management Committee (2010) *Community Evacuation* State Emergency Management Policy 4.7

- The decision to commence ‘directed evacuations’ is made by the controlling agency when members of the community at risk do not have the capability to make an informed decision or when it is evident that loss of life or injury is imminent. In the case of a directed evacuation, the controlling agency will advise community members of the most suitable location to evacuate to based on the prevailing situation.
- Where there is a ‘refusal to evacuate’, the controlling agency is to ensure, as far as practical, that those who refuse to evacuate understand the risks of staying and are capable of making an informed decision. Where possible procedures should be developed to track remaining residents welfare.

The evacuation policy is guided by the principle of **primacy of life**. Primacy of life has had a more specific focus nationally following the 2009 Victorian Bushfires Royal Commission. The Australasian Fire and Emergency Services Authorities Council (AFAC)⁴⁵ position on bushfires and community safety states that:

In all cases, the protection of people should be the first and highest priority for fire agencies and others while controlling bushfires⁴⁶.

AFAC’s position recognises that

People usually have two safe options when threatened by bushfire: leaving early or staying and defending adequately prepared properties. Leaving early is always the safest option⁴⁷.

It also notes that fire fighting resources will not always be available to protect every property:

In most circumstances fire agencies will be able to provide sufficient firefighting resources to defend threatened properties when bushfires occur. However, there will be circumstances when agencies are unable to provide firefighting resources in sufficient time and strength to prevent all loss of life and damage to property. Additionally, firefighting resources are likely to be allocated where they will be most effective at protecting lives, not necessarily where property losses are most likely. Firefighting resources are unlikely to be allocated to property that cannot be defended safely⁴⁸.

⁴⁵ Australasian Fire and Emergency Services Authorities Council (2010) *Bushfires and Community Safety – Position Version 4.1*. Note: this document provides principles for application by fire, land management and emergency service personnel and is not itself intended to provide advice to the general public

⁴⁶ *Ibid*, p.4

⁴⁷ *Ibid.*, p.1

⁴⁸ *Ibid.*, p.5

The Special Inquiry heard evidence that the increased emphasis on the primacy of life, and in turn a greater emphasis on evacuation, has led to an increase in property loss.

The Special Inquiry does not dispute the priority given to protecting life, however, it is concerned that the process of widespread evacuation may be at odds with the focus on educating people about risks and empowering individuals and communities to exercise choice and take responsibility, as set out in the *National Strategy for Disaster Resilience*⁴⁹. The Strategy has an explicit focus on building disaster resilient communities, noting that in these communities:

*People understand the risks that may affect them and others in the community. They understand the risks assessed around Australia, particularly those in their local area. They have comprehensive local information about hazards and risks, including who is exposed and who is most vulnerable. They take action to prepare for disasters and are adaptive and flexible to respond appropriately during emergencies*⁵⁰.

The *National Strategy for Disaster Resilience* further defines a disaster resilient community as one where people have taken steps to anticipate disasters and to protect themselves.

The Special Inquiry spoke with residents who questioned the rationale for preparing their own bushfire plan setting out what they will do during a fire event if it is likely they will be evacuated anyway.

The Special Inquiry was concerned that the widespread use of evacuation as a strategy to protect life has the potential to disempower communities, rather than building resilience. Residents could choose not to engage in community level preparations, not consider what action they would take during a bushfire, or not take adequate steps to protect their properties, if they believe the default response to an emergency is to evacuate.

The decision to evacuate needs to take into account prevailing conditions and the level of threat, the level of preparedness and capability of individual property owners (this is discussed further in Chapter 5), and vulnerable populations within the area. **Vulnerable groups should be identified in local emergency management plans before the fire season.**

The evacuation process for the Roleystone-Kelmscott fire is discussed in Chapters 4 and 5.

⁴⁹ National Emergency Management Committee (2010) *National Strategy for Disaster Resilience*

⁵⁰ Ibid., p.5

2.5 EMERGENCY MANAGEMENT

Emergency management in Western Australia is based on the principle of graduated response. This means responsibility for resourcing and responding to an emergency initially rests at the local level. Where a controlling agency determines that an emergency requires resources beyond the capability of the local community, support from district resources may be obtained. Further State resources may be provided should district resources be inadequate.

Using the graduated response principle, the declaration of an incident level under WESTPLAN-BUSHFIRE and SEMP 4.1 triggers a range of notification processes to secure additional resources and establish coordination arrangements. For example, a Level 1 incident, which is considered routine, requires notification to FESA and allows the transfer of resources between DEC and local government. However, a Level 3 incident, defined as major or complex, requires the formation of an Incident Support Group and consideration of an Operational Area Support Group.

An Incident Support Group (ISG) consists of Liaison Officers from local organisations involved in the incident and serves to assist the Incident Controller through the provision of information, expert advice, support and resources relevant to their organisation. An ISG is activated when an incident is designated as 'Level 2' or higher or multiple agencies need to be coordinated.

An Operational Area Support Group consists of agency/organisation representatives convened by the Operational Area Manager to provide agency specific information, expert advice and support in relation to the strategic management of the incident. It is activated by, and provides support to, the Operational Area Manager. The Operational Area Manager is designated by the relevant Hazard Management Agency (HMA) as responsible for the overall management of an Emergency within a defined Operational Area and the provision of strategic direction and operational coordination to agencies and Incident Controller(s) in accordance with the needs of the situation. This arrangement is depicted in figure 1.

Figure 1 - Operational Management Structure⁵¹

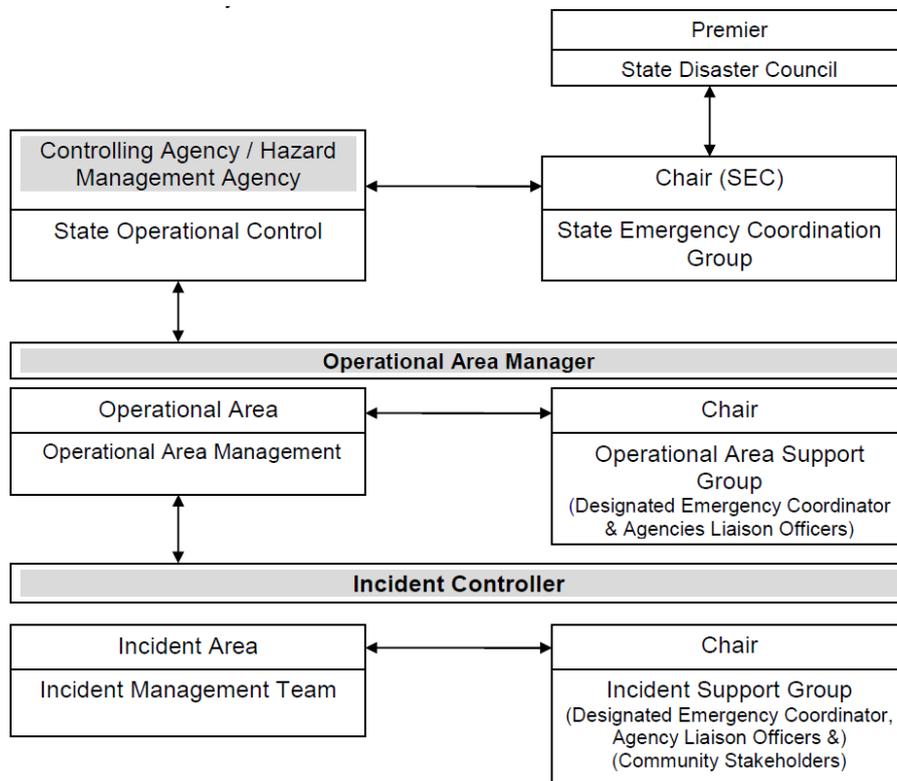


Figure 4: The operational management structure.

The State Emergency Coordination Group (SECG) comprises representatives from key agencies involved in an emergency response and recovery and is established at State level to assist in the provision of a coordinated multi-agency response to and recovery from the emergency.

Under WESTPLAN-BUSHFIRE an SECG will be convened if:

- it is requested by the HMA due the nature and extent of bushfires and one or more emergency situations has been declared by the HMA; or
- on the request of the Commissioner of Police⁵²; or
- if a State of Emergency has been declared under the *Emergency Management Act 2005*.

This reflects provisions for the establishment of an SECG set out in Section 26 and 27 of the *Emergency Management Act 2005*.

The Special Inquiry understands that the SECG was convened on 6 February 2011 following discussions between the Commissioner of Police in his role as State

⁵¹ SEMC, SEMP 4.1, op.cit., p.17

⁵² The Commissioner of Police chairs the SECG in his role as State Emergency Coordinator

Emergency Coordinator and the Chief Executive Officer of FESA (as the HMA). However, the Special Inquiry was concerned that the SECG meeting was not held until 6.30pm. The Special Inquiry considers that the Commissioner of Police, as State Emergency Coordinator and Chair of the SECG, should take a more active role in convening the SECG, including intervening and calling an SECG without waiting to be asked by the HMA.

The procedure for SECG contained in the State Emergency Management Procedures Manual⁵³ on SECG notes that the SECG will meet at the location designated in the relevant State emergency management plan, or at another location at the direction of the State Emergency Coordination in consultation with the relevant HMA. As the State emergency management plan (WESTPLAN-BUSHFIRE) does not specify a location, the location is determined by the State Emergency Coordinator (the Commissioner of Police) in consultation with the HMA.

The effectiveness of the coordination of the emergency management response and compliance with the requirements of WESTPLAN-BUSHFIRE and the State emergency management policies during the Roleystone-Kelmscott fire are discussed further in Chapter 4.

2.6 COMMUNITY EDUCATION

Effective community education and engagement is critical to ensure residents are adequately informed of the steps they need to take to prepare their properties for bushfire, and to understand what might happen during a bushfire.

This was a particular focus of the 2009 Victorian Bushfires Royal Commission which considered advice must be provided to the community in a way that engages them, noting the need for a continued focus on providing frank and meaningful advice about the risks and what is required to adequately prepare for and survive a bushfire.

The Royal Commission advocated 'shared responsibility', recognising the role of government agencies but also noting that:

communities, individuals and households need to take greater responsibility for their own safety and to act on advice and other cues given to them before and on the day of a bushfire⁵⁴.

⁵³ State Emergency Management Committee, *OP-11, State Emergency Coordination Group* in 'State Emergency Management Procedures Manual'

⁵⁴ 2009 Victorian Bushfires Royal Commission, *op.cit.*, p.6

This is also a common theme in the *National Strategy for Disaster Resilience*⁵⁵. The Strategy notes that:

*Fundamental to the concept of disaster resilience, is that individuals and communities should be more self-reliant and prepared to take responsibility for the risks they live with*⁵⁶.

The Strategy recognises the need to provide people with information and warnings, but notes that educating people on how to act on their knowledge is equally important. It also emphasises the importance of people being able to exercise choice about how they deal with local hazards and risks.

FESA provided the Special Inquiry with information on its community engagement framework and community education programs, including open days, information sessions, newspaper advertising, mail-outs, and the distribution of publications and DVDs aimed at assisting residents to prepare for and survive the bushfire season⁵⁷. FESA's community engagement framework recognises the need for a localised approach to enable the community to become more actively involved in problem solving and decision making. Through the *Bushfire Community Engagement Program 2008-2013*, FESA identifies priority locations in the lead-up to each Bushfire Season which become the focus of 'localised' engagement strategies that seek to address local risk through a range of activities.

The Special Inquiry heard local governments also provide a range of information to residents about the requirement to clear fire breaks, reduce fuel loads and prepare for the bushfire season. For example, the Shire of Mundaring provided the Special Inquiry with a copy of its *Fire and Burning Information* booklet which is provided to residents. The Serpentine Jarrahdale Shire dedicates a page in its regular newsletter to emergency services, including bushfire risk management.

The Special Inquiry also heard about the role Volunteer Bush Fire Brigades play in community education, including providing information and advice, distributing materials and working with Bushfire Ready Action Groups. The Bushfire Ready Action Group program is aimed at encouraging local residents to work together to prepare and protect people and properties from bushfire.

Following the fires, FESA commissioned the Bushfire Cooperative Research Centre (CRC) to conduct bushfire community safety research, which included a survey of residents' experience of the three fires in the Perth Hills on 6 February 2011 (Roleystone-Kelmscott, Red Hill-Brigadoon and Gidgegannup). While it is regrettable that the detailed analysis and final report will not be available until

⁵⁵ NEMC, op.cit.

⁵⁶ NEMC, op.cit., p.10

⁵⁷ Submission of the Fire and Emergency Services Authority

after the Special Inquiry reports, the Special Inquiry was provided with a 'draft online report' of the responses to the questionnaire⁵⁸. A degree of caution is required in interpreting the results, however the preliminary data provided in relation to the Roleystone-Kelmscott responses⁵⁹ indicates:

- In the 12 months prior to the fires, 36 per cent of respondents had encountered information about **how to prepare your household** for bushfires from the *Prepare. Act. Survive.* publication. 20 per cent of people had not encountered any information. Other sources of information encountered by more than 10 per cent of respondents were television (26 per cent), ABC local radio (23 per cent), family, friends or neighbours (17 per cent), local government website, newsletters or inquiries (17 per cent), newspapers (14 per cent), emergency services personnel (11 per cent) and the FESA website (11 per cent).
- 34 per cent of people had encountered information about **what to do during a bushfire** from the *Prepare. Act. Survive* publication, while 24 per cent had not encountered any information. Other sources of information encountered by more than 10 per cent of respondents were television (26 per cent), ABC local radio (23 per cent), family, friends or neighbours (15 per cent), and local government website, newsletter or inquiries (12 per cent).
- Before the fire, 81 per cent of respondents thought it was likely or very likely that a bushfire could occur in their town or suburb, and 71 per cent thought the significance of the threat to life and property in their town or suburb was high or very high.

The draft Major Incident Review commissioned by FESA found that FESA had an effective community education approach, offering appropriate and current bushfire safety information to residents and communities in high risk bushfire areas⁶⁰. While the draft MIR noted that it did not review the distribution of material in detail, it noted that it is for FESA to make it accessible and for responsible residents to gain the information and act upon it.

Notwithstanding this, the Special Inquiry received evidence that information provided to residents on bushfire risk was not always timely or effective. The draft MIR itself noted that the FESA publication ***Prepare. Act. Survive is not currently disseminated to all households within very high risk bushfire*** area due to resource limitations and the preliminary data from the Bushfire CRC survey discussed above suggests well under half of residents had encountered the

⁵⁸ Letter from University of Western Australia to FESA dated 25 May 2011

⁵⁹ Bushfire Cooperative Research Centre (CRC) (2011). *Kelmscott-Roleystone Update*. Online report of responses – as the data entry has only just been completed, no intensive data screening has occurred. This means the results may deviate from the final report. The report only provides a 'snapshot' of the responses and does not provide any account of the interrelationships among the different questions – this will be discussed in the final report

⁶⁰ Ellis, op.cit., p.27

publication in the twelve months before the fires. The Special Inquiry heard that some residents did not receive the publication until **after the fire** and found a poor understanding in the community of some key messages around bushfire preparedness, namely:

- The Water Corporation cannot guarantee water supply during a fire. Residents planning to stay and defend their properties need to have an independent water supply (such as a water tank or swimming pool). While this information is included in information in FESA publications and on the Water Corporation's website, the Special Inquiry heard that many residents were not aware of this before the fire. This was supported in the draft data from the Bushfire CRC survey which suggested around 57 per cent of respondents did not expect to lose water supply in the event of a fire⁶¹.
- Similarly, Western Power cannot guarantee power during a fire, and in fact may close off power to any area during a fire for safety reasons. Residents planning to stay and defend their property will need an independent power source. A lack of power will also impact on water supply and communications – including those telephone handsets which cannot operate without power. Again, the Special Inquiry found many residents were not aware of this, but only around 14 per cent of respondents to the Bushfire CRC said they did not expect to lose electricity supply in the event of a fire⁶². However 31 per cent of respondents did not expect to lose internet connectivity and 29 per cent did not expect to lose their landline phone.
- The Special Inquiry heard that some residents had unrealistic expectations of the fire response – believing fire trucks would be available to protect every property, and aerial fire fighting could quickly contain a fire. This led to a sense of complacency and a lack of preparation. The Special Inquiry heard that aerial fire fighting was restricted by the topography in the Perth Hills, high temperatures and strong winds.
- The Special Inquiry was told that some residents now feel the preparation of a fire plan is 'futile' if they are going to be forced to evacuate their homes.
- While not disputing the emphasis on saving life, the Special Inquiry found many residents did not understand why firefighters did not do more to protect properties.

While accepting that detailed information is available, the Special Inquiry found a lack of understanding or awareness in the community which suggests more needs to

⁶¹ Bushfire CRC, op.cit.

⁶² Bushfire CRC, op.cit.

be done to ensure the message actually gets through and prompts action by landowners. This was supported by Roleystone residents Mr Max and Barbara Margetts who told the Special Inquiry:

*FESA has already produced a great deal of informative material that can be accessed through their website. From our discussions with other people who live in the fire area, it is evident that not much is known about this material or how to best apply the many strategies and checklists to their own situation.*⁶³

The preliminary data from the Bushfire CRC showed 42 per cent of respondents had made a firm plan about what to do if a bushfire occurred, and 21 per cent had decided what to do and were thinking about how to make it work. 24 per cent of respondents rated their preparedness as high or very high, while 45 per cent considered their preparedness as average, with 31 per cent rating their preparedness as low or very low⁶⁴.

The survey also asked respondents to indicate specific actions taken to prepare for bushfire, both before and during the fire. While detailed analysis of the responses has not been completed, there appears to be wide variation in the degree of preparation by residents.

In contrast, the Special Inquiry also heard evidence that some residents were well prepared and had cleared their properties and put fire breaks in place before the fire season. These residents had thorough fire plans in place which included independent power and water sources, and appropriate fire fighting equipment. In some cases, these residents chose not to evacuate, instead staying to successfully defend their properties and those of their neighbours. This is discussed further in Chapter 4 and reinforces the need for residents themselves to make use of information and advice provided by relevant agencies and the benefits of doing so. Engaging the community in exercising would also raise awareness in a real-life situation and test the effectiveness of policies and plans, including decisions about whether to stay and defend a property. This supports the *National Strategy for Disaster Resilience* priority outcome:

*Emergency management arrangements are sound, well understood and rehearsed and involve diverse stakeholders, **including members of the community***⁶⁵ (emphasis added).

⁶³ Submission of Max and Barbara Margetts, p.12

⁶⁴ Bushfire CRC, op.cit.

⁶⁵ NEMC, op.cit., p.13

Exercising is discussed further in Chapter 6.

Recommendation 6 (TOR 4 and 5)

The Fire and Emergency Services Authority, in partnership with local governments, conduct more focused pre-season bushfire education, which emphasises:

- Water supply is not guaranteed during a bushfire
- Power supply is not guaranteed during a bushfire
- Saving life will be a priority over saving property so expect to be evacuated
- Once evacuated, access to affected areas may not be possible for several days
- Water 'bombing' by aircraft cannot be guaranteed in bushfire
- SMS warnings are advice only and may not be timely.

Recommendation 7

The Fire and Emergency Services Authority (FESA) review its distribution of information material, including *Prepare. Act. Survive*. FESA should also consider including the community in pre-season exercises, in consultation with the Department for Child Protection and local governments.

Recommendation 8

Local governments continue to include information on bushfire risk and preparedness with rates notices.

Better community education is particularly important given the projected increase in population in the Perth Hills area, many of whom will have little understanding or knowledge of bushfire risk and the importance of preparing their properties. This is discussed further in Chapter 6.

The Special Inquiry appreciated the discussion it had with the Real Estate Institute of Western Australia (REIWA) regarding the high proportion of rental properties in the Perth Hills. Although local government is notified when a property has a new owner, tenants of rental properties do not necessarily come to the attention of the local government or FESA in order to be educated about bushfire prone areas.

The Special Inquiry considers information should be provided by real estate agents when a property is sold or leased to a tenant. This would ensure all new residents received a consistent package of information drawing their attention to the risks of

living in a bushfire prone area and the work needed to protect their property and prepare their family.

Recommendation 9

The Fire and Emergency Services Authority work in partnership with the Real Estate Institute of Western Australia to develop a package of information for new residents moving into bushfire prone areas, and a process to ensure this information is provided through real estate agents.

The COAG *National Enquiry on Bushfire Mitigation* recognised knowledge of ‘living with bushfire’ as a life skill all Australian children should acquire during their schooling⁶⁶. It recommended governments develop and implement nationally and regionally relevant education programs which emphasise individual and household preparedness and survival and the role of fire in the Australian landscape⁶⁷. This recommendation was supported by COAG, which noted existing work in some jurisdictions and the need to consider how bushfire education can be properly integrated in the school curriculum⁶⁸.

The Department of Education appeared before the Special Inquiry on 14 April 2011. During that Hearing, information was provided about the development of educational materials to support Overarching Learning Outcome 7: *students understand and appreciate the physical, biological and technological world in which they live and work*. This includes material relating to bushfire developed in conjunction with FESA and put into schools as an adjunct to the teaching of programs.

The Department of Education also told the Special Inquiry that there is some flexibility for schools to make the curriculum meet the needs of their local community. While the Special Inquiry understands some schools will be proactive in ensuring bushfire education is integrated in the curriculum after recognising the students live in an area of high bushfire risk, there is no specific policy which requires this to happen.

⁶⁶ Ellis, S, Kanowski, P & Whelan, R (2004) *National Inquiry on Bushfire Mitigation and Management*. Commonwealth of Australia, Canberra

⁶⁷ Ibid., Recommendation 3.1, p.39

⁶⁸ Council of Australian Governments (2006) *Response to the National Inquiry on Bushfire Mitigation and Management*

Recommendation 10

The Department of Education oversee the provision of bushfire education in schools that are located in bushfire prone areas, ensuring that **all** schools in these areas incorporate key bushfire messages in their curriculum

The Special Inquiry's Terms of Reference did not ask it to address the cause of fires in the Perth Hills area. However the Special Inquiry found a general lack of understanding of what a total fire ban meant. The Special Inquiry heard evidence that many residents did not know what activities were prohibited when a total fire ban was in place.

This was reinforced on 5 May 2011 by the President of the Emergency Services Volunteers Association, Mr John Iffla, when he said:

Can we get the wording 'fire ban' changed? . . . people don't fully understand or they think that a fire ban is you can't light a fire, when it's actually a lot more involved than that.

The preliminary results from the Bushfire CRC survey of residents indicated 38 per cent of respondents did not know a total fire ban was in place on 6 February 2011⁶⁹. However the Special Inquiry also heard from the ABC on 18 April 2011 who said that the detail of what a total fire ban means is included in their broadcasts advising a total fire ban is in place.

While not disputing this, the Special Inquiry believes more work is needed to ensure people knew when a total fire ban was in place, and understand what this means. That said, just as in the case of everyday advertising, the message can get stale or lost, so work needs to be done to keep the message dynamic but clear.

The Special Inquiry explored the use of mobile variable message boards and notes evidence from the Shire of Mundaring about its use of variable road signs to alert residents to issues such as when permits are needed for burning⁷⁰. The Special Inquiry also heard evidence from FESA that since the Roleystone-Kelmscott fires FESA had gained agreement from Main Roads Western Australia for the use of mobile temporary road signs⁷¹.

⁶⁹ Bushfire CRC, op.cit.

⁷⁰ Shire of Mundaring – Hearing 6 May 2011

⁷¹ Fire and Emergency Services Authority – Hearing 29 March 2011

Recommendation 11

The Fire and Emergency Services Authority consider alternative wording to Total Fire Ban that ensures people gain a more complete understanding of what actions are prohibited.

Recommendation 12

The Fire and Emergency Services Authority work in partnership with Main Roads Western Australia and local governments to develop and implement a comprehensive strategy for the use of mobile variable message boards to alert the community to the declaration of a total fire ban and what it means.

The Western Australia Police provided the Special Inquiry with information on their Bushfire Arson Intervention Strategy⁷². The Strategy was developed in response to FESA warnings of an extreme fire risk season for 2010-11 and an identified 160 per cent increase in bushfire arson for the period 1 October 2010 to 5 January 2011.

⁷² Western Australian Police (2011) *Bushfire Arson Intervention Strategy: Strikeforce Vulcan* Unpublished document - tabled at a Hearing on 14 March 2011

CHAPTER 3: FUEL LOAD AND THE FIRE

3.1 PRECEDING WEATHER CONDITIONS

In October 2010, the Bureau of Meteorology (BOM) issued a seasonal outlook of the fire potential for the 2010-11 fire season (October to May) that was above normal for large parts of the south west of WA⁷³. As the Minister for Emergency Services told Parliament on 11 November 2010:

The season outlook is clear. Despite recent rains, Western Australia is facing one of its worst bushfire seasons in history after the State recorded one of its driest winters...The bushfire season is already ahead by six weeks. Our emergency services have already dealt with more than a dozen significant bushfires in recent weeks, some of which have threatened life and property. A national report by the Bushfire Cooperative Research Centre warns that large parts of WA face an above normal fire risk because of increased fuel loads from dry bush and grasslands. This means that early season bushfires are fast moving and extremely challenging for firefighters to control.

The BOM's forecast and the Minister's warning were reflective of not only the record low rainfalls across the State, but also above average mean temperatures, a number of heat wave events and drier than average drought indices. In its submission to the Special Inquiry, the BOM explained that:

- 2010 was one of the driest years on record across the Perth Metropolitan area, **with sites in the Roleystone-Kelmscott area observing either their lowest or second lowest annual total rainfall on record.** Annual rainfall totals were generally **40 to 50% lower than normal.** Mundaring in the Perth Hills registered 599.6mm in 2010 which was the **driest year in 107 years of record, and the first annual rainfall total below 600mm.**
- **2010 was the hottest year on record** for sites in the Roleystone-Kelmscott area in terms of mean maximum temperature. Annual mean maximum temperatures were 1°C to 1.5°C above normal and mostly in the 24 to 26°C range.
- A single rainfall event on 5-6 January 2011 reduced two key drought indices, the Keetch-Bryam Drought Index and the Soil Dryness Index, which from September were both **the driest in the last 5 years.**

⁷³ Fire Potential is defined by BOM as the chance of a fire or number of fires occurring of such size, complexity or impact that requires resources (from both a pre-emptive management and suppression capability) beyond the area of fire origin. Fire potential depends on many factors including weather and climate, fuel abundance and availability, recent fire history and fire management resources in an area

These weather patterns combine to influence the prevailing Drought Factor, which is an estimate of fine-fuel dryness and the proportion of the fine fuels in a forest that will burn in a fire. A drought factor of 0 means all fuels are wet and no fires are possible. A drought factor of 10 means that all fuels are dry and ready to burn. **On 6 February 2011, the drought factor was 10** according to the BOM⁷⁴.

The weather conditions outlined above are consistent with the longer term trends that are evident in WA. Rainfall over the south-west of the State has decreased by almost ten per cent in a step change since the mid-1970s, and has shown a further decline in the most recent decade⁷⁵. Research by the Indian Ocean Climate Institute indicates that this rainfall decline is due to a decrease in the number of troughs associated with wet conditions in south-west WA, and a reduction in the amount of rainfall in other synoptic situations.

In research undertaken at the request of the Special Inquiry, the BOM was also able to demonstrate that the declining rainfall in WA has been accompanied by an increase in the frequency of extremely dry easterly winds. A dewpoint⁷⁶ (moisture of the air) and easterly wind frequency analysis was performed on the three hourly dataset at Perth Airport from 1965. This analysis demonstrated that the percentage of extremely dry events (dewpoint below 0.4°C) observed in easterly winds has gradually increased since the late 1970s.

These extremely dry easterly winds increase both the intensity and the rate of spread of bushfires (planned and unplanned), making them even more difficult for fire authorities to control. The impact that changes in the State's weather pattern has had on prescribed burning and other bushfire mitigation activities is discussed below.

3.2 FUEL LOAD: ASSESSMENT AND MANAGEMENT

Fuel Load and Prescribed Burning

Emergency Management Australia (EMA) defines 'fuel load' as the amount of fuel available to burn, as determined by the type of vegetation, how much of it there is, its 'fineness' and its moisture content. **Fuel management is defined as the manipulation of this fuel load across the landscape for the purpose of minimising the size and intensity of bushfires.**

⁷⁴ Bureau of Meteorology (BOM)(2011) *Meteorological Aspects of the Red Hill/Gidgegannup and Kelmscott/Roleystone Fires of 5 and 6 February 2011*, 6 April 2011

⁷⁵ Ibid., p.6

⁷⁶ Dewpoint is an absolute measure of the moisture content of the air and is the temperature to which air must be cooled in order to form dew

It is well established that fuel loads have a significant impact on both the incidence and intensity of bushfires. The 2009 Victorian Bushfires Royal Commission explained:

Bushfires obtain their energy from fuel and their speed and direction from the weather, topography and the fire itself. These factors affect fire behaviour, including the rate of spread, flame height and angle, persistence in the area, and the way firebrands travel. The only element that can be controlled by humans is the management of fuel⁷⁷.

Fuel loads are most typically and effectively managed by the systematic application of prescribed burning, understood as the controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity, and rate of spread required to attain planned resource management objectives.

The Special Inquiry heard extensive evidence in support of the effectiveness of prescribed burning in contributing to the control of bushfires and in limiting the incidence of such fires. Recent studies conducted in WA concluded that hazard reduction by prescribed burning will reduce the rate of spread, flame height and intensity of a fire, as well as the number and distance of spotfires by changing the structure of the fuel bed and reducing the total fuel load⁷⁸.

The reduced fire intensity and rate of spread observed when bushfires enter a reduced fuel area allows firefighters greater opportunity to effectively combat the fire and to limit its impact. In fact, the Special Inquiry heard evidence that the Roleystone-Kelmscott fire was extinguished on one front when it entered a section of the Banyowla Regional Park that had been the subject of a prescribed burn by DEC four years ago, as discussed later in this chapter.

It has also been demonstrated that prescribed burning will reduce the incidence of bushfires by maintaining areas of sparse fuel that are less likely to remain alight following ignition⁷⁹. This is supported by an analysis of fire statistics for forests in the south-west of WA between 2000 and 2006 which shows that lightning-caused fires, which should be randomly distributed at a landscape scale, are less likely to be sustained in areas where the fuel is less than five years old⁸⁰.

⁷⁷ *The 2009 Victorian Bushfires Royal Commission*, p.280.

⁷⁸ Gould JS, McCaw WL, Cheney NP, Ellis PF, Knight IK, Sullivan AL. (2007) *Project Vesta – Fire in Dry Eucalypt Forest: Fuel structure, fuel dynamics and fire behaviour*. Enis-CSIRO, Canberra ACT, and Department of Environment and Conservation, Perth WA, Executive Summary, p.5

⁷⁹ McCaw, W.L., Gould, J.S. and Cheney, N.P. (2008) *Quantifying the effectiveness of fuel management in modifying wildfire behaviour*. Paper presented to the 2009 AFC Conference, Adelaide

⁸⁰ Submission of the Department of Environment and Conservation, p.19

While acknowledging that some commentators continue to question the value of prescribed burning as a bushfire mitigation technique, the Special Inquiry was convinced by the weight of scientific evidence provided by the Commonwealth Science and Industrial Research Organisation (CSIRO), Bushfire Cooperative Research Centre (Bushfire CRC), DEC and others that **prescribed burning is the most effective preventative measure that can be employed to manage fuel loads and mitigate the impact of bushfires.**

However, the Special Inquiry noted in evidence and discussions with interstate fire agencies the importance of distinguishing quality from quantity in prescribed burning programs. **There is a need to target burns in areas that will have the greatest impact on community safety.** This issue is explored in greater detail below in a discussion of the prescribed burning administered in WA.

Responsibility for Fuel Load Management

From the outset of this Review, **the Special Inquiry could find no single source of information about aggregated fuel loads in the Perth Hills.** This is despite the obvious need to have such a figure to understand the full extent of the threat of bushfire in the Perth Hills and despite numerous previous reviews drawing attention to this issue, as discussed in Chapter 2.

Under the current arrangements, FESA is responsible for the management of fuel loads on all Unallocated Crown Land (UCL) and Unmanaged Reserves (UMR) within gazetted town sites throughout the State and in the metropolitan area. FESA fulfills these responsibilities on behalf of the Department of Regional Development and Lands (RDL), with which it maintains a Memorandum of Understanding (MOU) for the provision of fire management services. The UCL and UMR under FESA management totals approximately 0.89 million hectares⁸¹.

DEC is responsible for the management of fuel loads on more than 26 million hectares of DEC managed estate which includes national parks, conservation parks, regional parks, State forests, timber reserves and nature reserves. DEC also maintains responsibility for a further 89 million hectares of land across all non-town site UCL and UMR in accordance with an MOU between it and RDL⁸².

Local government has responsibility for the management of fuel loads on all freehold land that it owns, as well as all Crown land vested in it under the *Land Administration Act 1997 (WA)*, which includes local government parks and road reserves (verges). Under the *Bush Fires Act 1954 (WA)*, local government is responsible for establishing minimum standards of fire prevention for all other

⁸¹ Submission of the Fire and Emergency Services Authority, p.185

⁸² Submission of the Department of Environment and Conservation, p.1

non-government lands. Local government may direct a private property owner to conduct burning or other works as it deems appropriate to reduce the fuel load.

Prescribed Burning Programs

The Special Inquiry was **not provided with any evidence that FESA has developed or instituted a State level, strategic prescribed burning program** for the land under its management. FESA's primary focus appears to be on maintaining an effective suppression response capability.

In its submission, FESA explains that through its Bushfire and Local Government Relations Branch, FESA provides assistance to local governments to assist them in the management of their bushlands. However based on the evidence provided to it, **the Special Inquiry was not able to determine the extent to which this engagement contributes to a broader, joined-up and coordinated prescribed burning program.**

On page 268 of its submission, under the heading of 'Prescribed Burning', FESA provides a detailed explanation of an Integrated Bushfire Risk Management System (IBRMS) that it is currently developing. The Special Inquiry understands this system is intended to bring together much of the information that is needed for FESA to institute a strategic prescribed burning program. The merits and cost-effectiveness of this system, along with the approach to its development are discussed later in this chapter.

As the State's land management agency, DEC has the most significant prescribed burning program in WA. DEC operates a rolling three year (six season) master burning program with a target to reduce fuel loads across the DEC managed estate in the south-west by 200 000 hectares per year. DEC's prescribed burning program is developed through consultation at the local level to identify priority areas for burning before being managed at the nine regional levels, three of which are in the south-west.

DEC consults widely on this program and has undertaken to present its indicative prescribed burning programs to FESA and local government prior to each season through the Interagency Bushfire Management Committee (which is discussed later in this chapter). In its submission to the Special Inquiry, DEC explains that:

The WA analysis indicates that in order to restrict the extent of forest fires to less than one per cent of the landscape each year, the proportion of the landscape that needs to be fuel reduced is around seven to nine per cent per year (or 35 to 45 percent over five years). In the case of south-west WA, the annual prescribed burning target of 200 000 hectares was developed as a reflection of this target range. At about eight per cent of the DEC-managed

estate, it is likely to result in average bushfire extent of less than about 30 000 hectares per year and more importantly, to significantly reduce loss of life and property and reduced environmental damage⁸³.

The *2009 Review of Western Australia's Bushfire Preparedness*, commissioned by the Premier in the wake of the Victorian 'Black Saturday' bushfires, found that the 200 000 hectare target administered by DEC in the south-west provides an appropriate level of protection against the risk of major destructive bushfires occurring on DEC managed land. **The Special Inquiry supports this finding but adds that the quality of prescribed burning is more important than the quantity.**

A number of concerns were raised by the community and other stakeholders in this regard with reference to DEC's prescribed burning program and the pursuit of a numerical burn target that does not necessarily reflect 'quality'. The Special Inquiry found that the majority of community concerns related to an alleged lack of fuel reduction burning on DEC estate immediately adjacent to urban areas.

These concerns are reflective of the fact that **DEC does not institute a specific prescribed burning program for the near-interface areas around the Perth Hills other than those developed under regional park fire preparedness and response plans.** Instead, DEC takes a landscape-scale approach to its prescribed burning program that is designed to ensure that a 'mosaic' of fuel reduced areas are maintained across DEC estate.

This approach ensures that major fires are not allowed to develop and make significant, uninterrupted runs through high fuels loads towards the urban interface, where they would be near-impossible to stop. The Special Inquiry heard that smaller fuel reduction burns immediately adjacent to urban development do not provide adequate protection to life and property unless they are complemented by more significant landscape-scale burns.

Landscape-scale 'mosaic' burns have been shown to slow the momentum of bushfires before they arrive at the urban interface, providing firefighters with a greater opportunity to control or extinguish the fire before it impacts on life or property. This approach was endorsed by the 2009 Victorian Royal Commission and is supported by extensive scientific research. It is employed by fire and land management agencies both within Australia and overseas.

Notwithstanding its focus on landscape-scale burns, DEC was able to provide the Special Inquiry with extensive location specific information about its prescribed burning activity. This included a range of fuel-age maps that it maintains for lands

⁸³ Submission of the Department of Environment and Conservation, p.19

under its management and other records that detail DEC's burning activity across the south-west. DEC's prescribed burning activities in the Perth Hills district⁸⁴ over the last three years and its indicative six-season program for this district are reproduced in the two tables below:

Table 2: DEC Prescribed burning in the Perth Hills district – 2007/08-2009/10

2007/08		2008/09		2009/10		Total	
No. of Burns	Area (ha)						
31	15 131	27	27 848	45	57 946	103	100 925

Table 3: Perth Hills six-season indicative prescribed burning program – 2011-2013

Year	Season	No. of Burns	Area (Ha)
2011	Autumn	66	60 895
	Spring	64	51 216
	2011 Total	130	112 111
2012	Autumn	19	17 173
	Spring	18	25 890
	2012 Total	37	43 063
2013	Autumn	8	13 890
	Spring	12	20 405
	2013 Total	20	34 295
TOTAL		187	189 469

The Special Inquiry heard that the forward or 'year one' weight in Table 3 is normal, as a high number of burns are planned and prescribed in order to provide flexibility to the program and allow burning on the most number of suitable days (the impact of weather conditions on prescribed burning is discussed below). It is expected that a number of these burns will not be completed and will be carried forward to the following year(s).

Despite DEC posting advice of its planned daily burns on its website and making its indicative burn schedule publicly available at local offices and online, the Special Inquiry found that there was a lack of awareness in the community regarding the extent of the DEC program. **Numerous submissions to the Special Inquiry raised concerns about a lack of fuel reduction burning in bushland that DEC was subsequently able to demonstrate had been burnt relatively recently.** Of particular note is the impact that a recent prescribed burn in the Banyowla Regional

⁸⁴ DEC broadly defines this district as the area that lies east of the Midlands Road and Great Northern, Roe, Tonkin, Albany and South Western Highways from Wannamal in the north to Waroona in the South. It extends eastwards just into the agricultural wheatbelt areas of Toodyay, York and Wandering

Park had on containing the Kelmscott-Roleystone fire. In his report reconstructing the fire spread on 6 February, the acclaimed research scientist Dr Lachlan McCaw notes:

The area of four year old fuel resulting from prescribed burning west of Urch Road [in Banyowla Regional Park] was burnt by flankfire spreading upslope. The intensity of the fire in the four year old fuel was considerably lower than in adjacent areas of older fuel...Reduced rate of spread and flame height in the four year old fuel would have assisted suppression of the fire in this area. In the situation where a south-westerly sea breeze was expected to reach the Darling Escarpment, as is often the case in summer, the existence of the four year old fuel could have been important in containing further spread of the fire north east across Urch Road into northern parts of Roleystone and towards Karagullen⁸⁵.

The Special Inquiry found that the community's perception of the DEC burn program is further confused by the complex tenure arrangements in the Perth Hills that results in uncertainty and misunderstanding among residents as to which authority has responsibility for the management of different parcels of land.

In its appearance before the Special Inquiry, DEC noted that while the capacity didn't currently exist, there was nothing to prevent it providing access to an interactive tool that would enable residents and other interested parties to search by a particular DEC-managed land area to ascertain when it was last subjected to a fuel reduction burn. The Special Inquiry is of the view that this facility would be of value to the community and serve to raise self-awareness of fuel reduction programs underway in WA.

This facility is also an opportunity for DEC and the community to share the responsibility for informing themselves through a transparent and accessible means. This issue is explored later in this chapter as part of a discussion of the online systems that are currently in use or under development by the State's fire authorities.

The Special Inquiry also heard that DEC has commenced work on an internal review of the fire protection and mitigation in regional parks, both in the Perth Hills and on the Swan coastal plain. DEC explained in its submission that:

The scope of this review will include ensuring that there is an appropriate balance between smaller protective burns at the urban interface and larger

⁸⁵ McCaw, Lachlan (2011). *Kelmscott-Roleystone Bushfire, Perth Hills Fire 107, Sunday 6 February 2011: Reconstruction of Fire Spread for the Period 1200-2300hrs*, Department of Environment and Conservation, 23 March 2011

burns in the forest belt away from the interface to create protection at a landscape scale⁸⁶.

Notwithstanding its earlier comments in relation to the application of prescribed burning on a landscape scale, the Special Inquiry supports this initiative by DEC to **ensure that it maintains a contemporary prescribed burning program that most appropriately reflects the risks posed by bushfires to that section of the community who are most exposed.** The Special Inquiry also recognises that due to the inherent risks involved, administering a prescribed burning program in the peri-urban fringe is far more resource intensive than similar programs in forests and other areas removed from the urban interface.

Recommendation 13

The State Government consider resourcing the Department of Environment and Conservation to work in collaboration with local governments to develop and administer a comprehensive prescribed burning program in Perth's urban/rural interface to complement the Department of Environment and Conservation's existing landscape-scale program.

As outlined above, local government in WA is responsible for the maintenance of all freehold land that it owns, land vested in it by the Crown and for establishing minimum standards of fire prevention for all other non-government lands (including private property) within its jurisdiction.

While the Special Inquiry was provided with evidence that effective prescribed burning and other fuel load reduction programs are underway in certain local government areas, it was equally made aware of significant deficiencies and disparities in these programs between local government areas.

Based on the evidence presented to it, the Special Inquiry formed the firm view that there is a significant amount of variability in both the quality and quantity of these programs across the local governments of the Perth Hills. As mentioned at the start of this chapter, of particular concern to the Special Inquiry was the fact that **these programs take place in complete isolation from each other, meaning that there is no aggregation of the fuel load, or the risk, that is spread across local government boundaries.**

The Special Inquiry met with a number of Volunteer Bushfire Brigades (VBFB) in these areas and was impressed by the level of dedication and professionalism displayed by each of their members. The commitment of Brigade members is

⁸⁶ Submission of the Department of Environment and Conservation, p.22

reflected not only in their willingness to turn out to fires, but in the time they spend training and engaging with the community to encourage its preparedness and resilience to bushfires.

In particular, the Special Inquiry was fortunate to have the opportunity to walk the Settlers Common in Armadale with the Bedfordale VBFB, which takes responsibility for the management of fuel loads in the Common. The Special Inquiry was impressed by the knowledge displayed by the Brigade members and the degree of rigor that had clearly been put into the prescribed burning program for Settlers Common over a number of years.

The Special Inquiry heard mixed reports regarding the extent to which prescribed burns are undertaken in concert between FESA, DEC and local government (VBFBs). While it is clear that some collaboration takes place, it appears that the extent of joint prescribed-burning varies considerably across the State.

Based on the evidence presented to it, the Special Inquiry formed the strong view that prescribed fuel reduction burns provide an excellent opportunity to build joint capability and foster mutual understanding between the agencies with fire responsibilities in WA.

Recommendation 14

The Fire and Emergency Services Authority, the Department of Environment and Conservation and local governments take proactive steps to conduct their prescribed burning programs as joint exercises. This will give effect to:

- Reducing fuel load;
- Improving inter-operability;
- A mutual understanding of the fire fighting techniques of each agency.

Improving the capacity of the VBFBs by increasing their involvement in State government agency burning programs will limit what the Special Inquiry considers are inevitable limitations in what can be achieved by the VBFBs. As was pointed out by the Bushfire Front Inc. in its submission to the Special Inquiry:

Any fuel reduction burning that is undertaken on private land and or land vested with Shire Councils is almost completely dependent on the volunteer bushfire brigades. Brigade members do a superb job, but are limited in the hours they can put into fire preparedness work. For instance, many volunteers generally are not available for burning during the week or at short notice so that they can take advantage of ideal conditions. Most Shires lack professionally trained and experienced officers who can measure and map

fuels, draw up prescriptions for burns, supervise prescribed burning, maintain data bases and train the community. Shires also lack resources for burning. A great deal of hazard reduction work could be done by a Shire crew under a trained overseer and with the support of a trained officer⁸⁷.

Recommendation 15

The Fire and Emergency Services Authority and local governments ensure that the ability to:

- measure and map fuel loads;
- maintain fuel load databases;
- draw up prescriptions for, and oversee controlled burns;

are included as key competencies in any future recruitment of Chief Bushfire Control Officers and Community and Emergency Services Managers.

In a number of submissions to the Special Inquiry, community members raised concern with what they perceived to be a lack action by local government with respect to fuel load assessment and management. This point was clearly illustrated to the Special Inquiry by a request it made of the City of Armadale for documentation showing the fuel load on lands it was responsible for within the City over the past three years.

In response to this request, the Special Inquiry was provided with a range of documents that provide no evidence to suggest that a systematic, coordinated and comprehensive program of fuel load assessment is underway in the City. **In the absence of this information, the Special Inquiry could not satisfy itself that the City has instituted an effective fuel load management program. This determination is supported by reports of excessive fuel loads on Council land being met with inaction by the City.**

Of particular concern to the Special Inquiry was evidence presented to it by members of a local Bushfire Ready Action Group (BRAG) that indicates considerable reluctance on the part of the City of Armadale to accept responsibility for the care and maintenance of its street verges. In an April 2011 meeting of this group, the issue of 'vacant untended blocks and the over-grown and hazardous verge' along a local road was raised with the City's Chief Bushfire Control Officer. The residents' concern was that this road was their 'only escape route in the event of a serious fire' and that in its current condition would pose a significant threat to their life and safety.

⁸⁷ Submission of the Bushfire Front Inc.

The minutes of this meeting record that the City's Chief Bushfire Control Officer explained to the BRAG that:

...if the Council accepted responsibility for keeping the verges clear then it would be an enormous job and the Council rates would rise significantly.

The 'Actions' of the BRAG meeting go on to record that the City's Chief Bushfire Control officer will:

Talk to the Council regarding this grey area [responsibility for street verges] in legislation⁸⁸.

This evidence raised two significant concerns for the Special Inquiry. First, by acknowledging that the City of Armadale does not accept responsibility for 'keeping the verges clear', **the City's Chief Bushfire Control Officer seemingly conceded a lack of knowledge about the fire risks posed by the state of vegetation within the City of Armadale.** It follows from this that no aggregation or mapping of fuel loads is taking place across the City. This observation is supported by documentation provided by the City in response to the Special Inquiry's request for evidence of prescribed burning in Lloyd Hughes Reserve over the last decade.

While the City was able to produce a document entitled *Fire History for Lloyd Hughes Reserve*, it is the view of the Special Inquiry that this document lacks credibility. While it produces the square meterage of all burns that are purported to have taken place in the Reserve since 2000, it does not allocate dates to these burns or provide any advice as to who undertook them. Furthermore, no evidence is provided in support of the square meterage attributed to three significant wildfires alleged to have burnt in the Reserve between 2000 and 2007.

The second issue that is of greater concern, is the apparent lack of understanding of the City of Armadale's legislative responsibilities under the *Land Administration Act 1997 (WA)* and the *Local Government Act 1995 (WA)* demonstrated by the Chief Bushfire Control Officer. The Chief Bushfire Control Officer's undertaking to '...talk to Council regarding this grey area in legislation' implies that there is some legal ambiguity with respect to the care and control of road verges.

⁸⁸ Confidential submission to the Special Inquiry

However Section 55 of the *Land Administration Act 1997* (WA), which vests the property of roads in the Crown, is explicit in providing for roads to be under the ‘care, control and management’ of the local government, as stated by subsection (2):

*Subject to the Main Roads Act 1930 and the Public Works Act 1902, **the local government within the district of which a road is situated has the care, control and management of the road** (emphasis added)⁸⁹.*

Furthermore, under the *Local Government Act 1995* (WA), a local government is responsible for the proper management of all local government property which is defined by section 4.1 as follows:

local government property means anything, whether land or not, that belongs to, or is vested in, or under the care, control or management of, the local government.

As detailed in legal advice prepared at the request of the Special Inquiry, it therefore follows that:

*a road verge is Crown land and the care, control and management of which is imposed on local government by the Land Administration Act 1997...Local government is responsible for the maintenance and management of all road verges within their districts...[and] **there is an overriding civil law duty on a person responsible for property to meet the community’s requirement for safety and to take reasonable care to minimise the risk of harm or injury. The obligation of a local council to care, control and manage a verge is also non-delegable.***

Based on this legal advice, the Special Inquiry reached the conclusion that there is no ‘grey area’ with respect to street verges. Local governments have responsibility for their care and maintenance and must ensure that measures are put in place to ensure community safety.

⁸⁹ ‘Road’ is defined by section 3 of the *Land Administration Act 1997* in the following terms: ‘**road** means, subject to section 54, land dedicated at common law or reserved, declared or otherwise dedicated under an Act as an alley, bridge, court, lane, road, street, thoroughfare or yard for the passage of pedestrians or vehicles or both’. According to legal advice received by the Special Inquiry, this incorporates all verges



Photograph of burnt debris located on a private property⁹⁰

The Special Inquiry is encouraged by advice from the Western Australian Local Government Association (WALGA) that it is developing a reporting system called *Send to Solve* that will assist local governments meeting their obligations in this regard. *Send to Solve* is designed as a 'one-stop-shop' for community resident to report issues such as potholes, broken street furniture or excessive fuel loads to their local government for attention. The system will automatically direct community reports to the relevant local government (or other authority) for action. Similar systems are in place in the Australian Government Territory with its 'Fix my Street' initiative, as well as in the United Kingdom, New Zealand and Canada where they have been shown to be effective. Based on the evidence presented to it, the Special Inquiry formed the view that this is a worthwhile initiative that should be strongly supported.

Recommendation 16

The State Government give its full support to WALGA's *Send to Solve* initiative.

The Special Inquiry heard evidence and was told at public meetings that the regime in place to ensure effective fuel load management on private property is not as effective as it could be. As mentioned in Chapter 1, a person who looks after their

⁹⁰ Photograph courtesy of David Carroll

property can be let down by a neighbor who is not as conscientious. A more effective system is needed to address these deficiencies in a way that does not lead to a breakdown of relationships between neighbours.

The Special Inquiry does wish to acknowledge the significant resource constraints faced by local governments with respect to fuel load assessment and management, particularly in the context of the range of other services they are obliged to deliver. Despite this, provision must be made to properly assess fuel loads so that the potentially devastating impact of bushfires can be mitigated. The issue of fuel load assessment and management with respect to local government resourcing is discussed further later in this chapter.

The Special Inquiry also does not suggest that these issues are unique to the City of Armadale. Residents of many local government areas in the Perth Hills raised concerns with the Special Inquiry with respect to an apparent lack of systematic fuel reduction on local government land, particularly in parks, reserves and along street verges. The challenges faced by local governments in this regard were explained by the Shire of Mundaring's Community and Emergency Services Manager, Craig Garrett in his appearance before the Special Inquiry on 6 May:

We have a program of reserve inspections that we undertook this year in spring and into summer, and part of that program in the future would be part of looking at fuel loads. But, as I say, it comes down to resourcing because the people who were undertaking inspections this year were myself and the deputy, as well as all the other things that I've got to do. So we have up to 900 parcels of land...in Mundaring....that make up the reserves and it was a full-time job over the spring and summer for us to look at. So it was really looking at the reserves, what had to be done with fire breaks, whether burning was required, slashing, spraying and, having undertaken fuel load sampling for the burns that I do, it's a large - it takes up a fair bit of time to do fuel sampling on each reserve. So certainly it can be done, but, as I say, it comes down to staff and resources to do it.

Ultimately, the lack of fuel load assessment and mapping both within and across local governments means that there is a lack of understanding of the total risk faced by the community in the Perth Hills. This situation is exacerbated by recent weather conditions.

The Special Inquiry also found that due principally to the resource constraints faced by local governments, their inspection and enforcement regimes focus predominantly on the maintenance of fire breaks at the potential exclusion of fuel load build up on other parts of private properties.

While the Special Inquiry subscribes firmly to the view that **'if you own the fuel load, you own the problem'**, it also considers that an effective inspection and enforcement regime by local government is required to ensure that residents maintain their properties in a responsible way. Local governments should therefore consider the introduction or expansion of any programs that place the initiative for responsible property (and fuel load) maintenance back in the hands of residents.

In particular, the Special Inquiry sees considerable merit in local governments expanding their green waste collection and removal programs to coincide with the months leading up to the fire season. The Special Inquiry expects this initiative will raise awareness in the community and provide residents with added motivation to better maintain their properties. This issue was raised extensively in submissions from residents. In a Hearing on 6 May 2011, Mr. David Redpath, a resident of Kelmscott remarked:

I think additional green waste pick-ups in these areas would be fabulous. Because just getting rid of the stuff as an individual is really hard because you know, you hire equipment and take it down to the tip and everything else. If you are in that sort of threatened area, additional green waste pick-ups would just be an absolute joy to have because you can get rid of tonnes of stuff a whole lot quicker and a whole lot easier.

Recommendation 17

Local governments increase the number of green waste collections carried out each year to encourage a more proactive approach to property and vegetation maintenance by residents.

Recommendation 18

The Western Australian Local Government Association explore the feasibility of local governments utilising aerial and satellite imagery to monitor firebreaks and fuel loads on private property.

The Special Inquiry is concerned that in the absence of knowledge of the aggregated fuel load across land tenures, it could not have been possible to accurately calculate the pre-season bushfire risk and therefore, **not possible to provide an accurate pre-season briefing to the Minister** as is customary for FESA prior to the fire season. As was pointed out by DEC in its submission to the Special Inquiry:

In the case of many landowners or managers, there may be a lack of awareness of fire risk, or a lack of capacity to address it, or both. Even local governments, many of which have undertaken prescribed burning and other fire mitigation measures in the past, have done less of such work in recent years. This may be due to community attitudes to fire or to a lack of resources. In some cases, the reduced involvement of bush fire brigades, particularly within the metropolitan Fire District, is a factor as they were previously an important resource in undertaking such works. Over time, in the absence of an optimal fuel management program, fuel loads in these areas have increased and the risk associated with using prescribed fire as a mitigation measure has increased significantly for the agency undertaking the work⁹¹.

This issue is picked up in the discussion of a tenure-blind approach to fuel load assessment and management below.

Limitations of Prescribed Burning.

Prescribed burning by its nature is an inherently dangerous exercise. To be undertaken safely and effectively, it requires precise weather conditions that provide those undertaking the burn with the greatest opportunity to control it, thereby limiting its potential to 'escape' and impact on life and property. Rainfall, wind direction and speed, temperature, topography, soil moisture and fuel type all impact on the ability of fire agencies to carry out effective prescribed burns.

These factors are exacerbated in an area such as the Perth Hills where the challenging terrain and buffeting winds combine with close proximity to property and critical infrastructure to further shrink the margin for error. This litany of factors means that, **in a given year, there may only be a handful of days that provide suitable conditions to safely undertake prescribed burns.**

These factors and the longer term drying of the climate have combined with the increasingly pronounced hot, dry conditions of recent years to leave DEC considerably behind in its prescribed burning program in the south-west. In evidence provided to the Special Inquiry, DEC showed that it had only achieved its prescribed burning target of 200 000 hectares twice in the last 14 years⁹² (the target was exceeded in 6 of these years once allowance is made for bushfires). These figures include reference to the 2010/11 burning season that at the time of writing had not been completed (although indications are that DEC won't reach its target for 2010/11).

⁹¹ Submission of the Department of Environment and Conservation, pp.24-25

⁹² *South West Prescribed Burning and Bushfires: 1960/61 to 2010/11*, provided by the Department of Environment and Conservation

The Special Inquiry heard that the difficulties DEC has faced in achieving its prescribed burn target in recent years have been exacerbated by the need to manage the risk of significant smoke pollution events in urban areas, particularly over metropolitan Perth. In its evidence to the Special Inquiry, DEC explained:

This issue [smoke management] is closely tied to weather in that the most suitable time in the regular weather cycle offering stable atmospheric conditions, particularly in spring, involves conditions that are conducive to the formation of temperature inversions that can trap and accumulate smoke in the lower atmosphere in and near Perth. Such days commonly involve south-easterly winds, especially overnight, which carry smoke from burns east and south of the city towards metropolitan Perth⁹³.

In addition to the public criticism that is often leveled at it on days when ‘excessive’ smoke clouds the skies, DEC has also been the subject of a number legal actions brought against it by vineyards who allege that smoke from prescribed burns on Crown land tainted their grapes rendering them unfit for winemaking.

Given the importance of DEC’s prescribed burning program to community safety, the Special Inquiry is of the view that DEC should be allowed the greatest possible flexibility in undertaking its burn program while complying with the relevant air quality standards. In fact, DEC’s record in this regard is commendable.

In accordance with section 14 of the *National Environment Protection Council (WA) Act 1996*, the *National Environment Protection (Ambient Air Quality) Measure*, allows up to five exceedances of a specific particulate matter measurement (PM10) per year. The DEC prescribed burning program has, over the past decade, operated with between zero and one exceedance per year for the Perth metropolitan area⁹⁴.

This issue was acknowledged by the State Government in 2009 when it approved DEC exercising greater flexibility in managing its smoke to achieve its prescribed burning program.

Recommendation 19

The State Government reaffirm its 2009 decision to approve the Department of Environment and Conservation exercising greater flexibility in managing smoke within national guidelines, in order to achieve its prescribed burn program.

⁹³ Submission of the Department of Environment and Conservation, p.23

⁹⁴ Follow-up information provided by the Department of Environment and Conservation, 3 June 2011

Alternatives to Prescribed Burning

The recent difficulties experienced by DEC and others in undertaking prescribed burns led the Special Inquiry to explore whether other fire hazard mitigation programs are in place to reduce risk. FESA, DEC and local government were able to provide information on their respective uses of a number of other fuel reduction techniques. These included:

- **Mulching:** A method of installing firebreaks and hazard separation zones in bushland by driving a large mulching machine through vegetation.
- **Slashing and Mowing:** A method used to reduce fuels by maintaining grasses and other suitable vegetation at specified heights.
- **Chaining:** The process of flattening vegetation (usually mallee or scrub) by dragging a heavy chain between two large tractors or bulldozers.
- **Chemical Spraying:** The application of fire retardant chemicals to vegetation that impedes the progress of bushfires. Chemicals can also be applied to eradicate vegetation altogether.
- **Grading or Ploughing:** The process of removing all flammable material from the ground leaving mineral earth.

The Special Inquiry formed the view that although each of these methods can make a worthwhile contribution to a larger suite of fuel reduction measures, their current lack of applicability on a landscape-scale in a similar way to prescribed burning limits their effectiveness in terms of overall bushfire risk reduction. The Special Inquiry heard that mulching, slashing and mowing are of particular value in urban-rural interface areas such as the Perth Hills where they can be used to provide smaller buffer areas or protective zones immediately adjacent to urban areas, infrastructure and other assets.

In recognition of the difficulties DEC has faced in meeting its prescribed burning target, the progressively drying climate and the likelihood of continued unfavorable conditions for prescribed burning, the Special Inquiry identified a need to further assess the widespread applicability of alternative fuel reduction measures in the Perth Hills area and the greater south-west.

Recommendation 20

The Fire and Emergency Services Authority, the Department of Environment and Conservation and local governments closely monitor the research and development of alternative fuel reduction techniques to ensure that the most efficient and effective programs are adopted.

Understanding the Risk: A 'Tenure Blind' Approach

The Special Inquiry spent considerable time trying to determine what mechanisms are in place to aggregate the fuel load that is spread across various land tenures and agency boundaries in the Perth Hills. In the absence of a composite total of the fuel load, it is the view of the Special Inquiry that it is not possible to determine the total risk posed to the State by the build-up of fuels in bushfire prone areas. The Special Inquiry was disappointed to conclude that no such aggregation mechanism currently exists, especially given the attention of numerous reviews bushfires over the past decade.

Just as concerning was the evidence provided by different authorities about the fact that they thought others were responsible for their fuel load. In particular, the Special Inquiry heard evidence that reflected a lack of understanding with respect to the build-up of fuel load on verges (as discussed above) and along river banks that traverse a range of tenures.

This issue was previously recognised in the *Review of Western Australia's Bushfire Preparedness* commissioned by the Premier in 2009. In that Review, it was recommended that:

- 1. FESA, DEC and Local Government will consult at the start of each fire season on fuel reduction priorities in high risk areas, prior to the respective agencies approving the overall annual master prescribed burning program.*
- 2. FESA, DEC and Local Government will prepare a State level strategic prescribed burning policy by Cabinet.*

To give effect to these recommendations and to encourage the broader aim of more effective cooperation among the State's fire authorities, in January 2010 the Minister for Emergency Services established the Interagency Bushfire Management Committee (IBMC) to:

- Provide a mechanism to ensure that the fire agencies operate under consistent policies, plans and procedures;*
- Examine opportunities and initiatives to improve interagency cooperation and interaction including resources, training and technology; and*
- Examine opportunities for 'whole of government' efficiencies and collaboration in bushfire management.*

One of the five sub-committees established under the IBMC was the Fuel Load Management sub-committee (the Sub-committee), chaired by FESA⁹⁵. This Sub-committee was tasked by the IBMC with the development of a State Fuel Load Management Policy in accordance with the recommendation of the 2009 Review outlined above. The minutes of the inaugural meeting of the Sub-committee, held on 18 March 2010, outlined its purpose as follows:

*The Fuel Load Management subcommittee [is] a new group that has been introduced with a **specific goal of developing a more holistic prescribed burning framework to support the management of bushfire fuels across all tenures to reduce potential for wildfire impact on communities** (emphasis added). The importance of involving WALGA in this framework to facilitate involvement of individual local governments was seen as a crucial element to achieving a more strategic whole of government approach to bushfire fuel management and fire prevention.*

The Special Inquiry found that the Sub-committee's progress in developing a State Fuel Load Management policy has been slow. While the draft policy document that it has produced (dated 15 March 2011) appropriately reflects the risks posed by bushfires and contains a number of commendable statements of ambition, **it is the view of the Special Inquiry that the adoption of the policy as it currently stands would have very little, if any, impact on mitigating the risk of bushfires.**

It is the view of the Special Inquiry that the fundamental issue inhibiting the development of a meaningful State Fuel Load Management Policy is the absence of the information that would form the foundation of such a policy i.e. the fuel load. In fact this view appears to be shared by the Sub-committee as is reflected in the minutes of its meeting of 21 June 2010:

*The only State level burning plan that is produced is the DEC program. Other burn programs developed are likely to be at local level and the IBMC Fuel Load Management [sub-committee] will not have visibility of these local plans. Consequently, it is not possible to identify any opportunities to ensure there is consistency between the various proposed plans across the State at the Fuel Load Management [sub-committee level]. For coordination to be effective, there needs to be close consultation and joint identification of objectives and priorities at the local level....**As the Fuel Load Management [sub-committee] cannot effectively complete the current terms of reference, there may be potential for an adverse finding against the State level group if an inquiry determined that the level of local coordination***

⁹⁵ The four other sub-committees of the IBMC are the Bushfire Research Sub-Committee; The Fire Operations Sub-Committee; the Training Sub-Committee; and the Aerial Fire Suppression Sub-Committee

between prescribed burning programs was not well developed (emphasis added)⁹⁶.

The minutes of this meeting show a remarkable degree of foresight on the part the Sub-committee.

Following the discussion outlined above, the Chair tabled a proposed amendment to the Sub-committee's terms of reference at the IBMC on 25 June 2010 as its original terms of reference '*...provided the assumption that this Sub-Committee will be wholly responsible for full coordination of fuel management programs*'⁹⁷. At the IBMC, the Sub-committee's original term of reference:

To co-ordinate fuel management programs to mitigate potential for community impact at high bushfire threat locations;

was subsequently amended to:

To coordinate the development of fuel management programs and plans to mitigate potential for community impact at high bushfire threat locations.

The Special Inquiry considers this to be a disconcerting change. While the amendment was relatively minor in a literal sense, the concession by the Sub-committee that it does not consider itself to be responsible for the full coordination of fuel management programs across that State appears to the Special Inquiry to be completely at odds with its precise *raison d'être*.

Rather than changing its terms of reference to deflect responsibility, a **more practical and constructive approach would have been for the Sub-committee to develop and institute a comprehensive, 'all-tenure' work program to collect and collate the information that is required to implement a meaningful State Fuel Load Management Policy.**

The importance of this issue was illustrated by the Bushfire Front Inc. in its submission to the Special Inquiry:

Information on fuel loads within and adjacent to fire-vulnerable communities is neither collected nor mapped and is thus not available to the public or to fire suppression commanders. There are no integrated regional fuel management plans, indeed no systematic approach to fuel/hazard management whatsoever. Not only does this mean that communities are exposed to an unidentified threat, it also means that when a fire does start there is no data

⁹⁶ Minutes of the Fuel Load Management Sub-committee, 21 June 2010

⁹⁷ Minutes of the Interagency Bushfire Management Committee, 25 June 2010

base on fuel age or weight that can be used by the Controller to plan suppression operations⁹⁸.

The Special Inquiry recognises the enormity of the challenge posed by developing such a policy. However it is the Special Inquiry's view that **the size of the challenge is not an acceptable reason for shrinking from it. Until the scale of the risk posed by the build-up of fuel loads is quantified by local governments and the State government agencies responsible for fire, it is not possible to ensure that the most effective programs are in place to mitigate against it.**

The essential first step is the collection and collation of the necessary information, which will require close and meaningful collaboration principally between FESA, DEC and local government. This work should be coordinated, monitored and overseen by the IBMC, which was instituted for this purpose.

The Special Inquiry found that collaboration with local government through the IBMC and Sub-committee processes under FESA's chairmanship has not been effective. While the Western Australian Local Government Association (WALGA) has had some involvement in the development of the State Fuel Load Management Policy by way of its membership on the IBMC and the Sub-Committee, no individual local government spoken to by the Special Inquiry had been given the opportunity to provide input.

It is the view of the Special Inquiry that a methodical process needs to be established to ensure that fuels loads are systematically assessed and managed as appropriate. In its submission to the Special Inquiry, FESA outlined a two phase process it has developed for this purpose as part of its Integrated Bushfire Risk Management System (IBRMS):

Phase 1

Strategic planning, identifying and assessing the risk: The regional assessments, analysis and prioritisation of bushfire risk on land within and adjacent to communities.

- *Using the Bushfire Threat Analysis (BFTA) to identify community risk at the State level;*
- *To focus at the community level and consider parcels of land that may present risk to the community within 1 to 3 kilometres of the community.*
- *To apply a logical and standard assessment process for each parcel using the BFTA methodology;*

⁹⁸ Submission of the Bushfire Front Inc., p. 7

- *Conducting specific site assessments to validate the BFTA information and assess current fuel loads;*
- *Rate land in order of highest risk to the community by using a scaling factor;*
- *Capturing information in an endorsed Community Bushfire Risk Mitigation Plan for each community [to be] distributed to all stakeholders.*

Phase 1 involves meeting with the Local Government and major stakeholders to consider community values and preferred methods to reduce the risk to mitigate against a bushfire impacting on the local community.

Phase 2

Operational Planning: The development of a three year rolling mitigation works program with annual implementation and review.

- *Develop 3 year rolling works 'treatment' schedule as part of Community Bushfire Risk Management Plans;*
- *Develop treatment options based on priority and budget;*
- *Decide on most effective treatment;*
- *Recording and sequencing mitigation treatments through the FESA IBRMS portal;*
- *Coordination of meetings with other stakeholders to complement works and optimise use of resources to achieve community protection;*
- *Develop scheduled works plans on a 3 yearly and annual basis that include slashing, mulching, parkland clearing, chemical spraying, dozing and grading for FESA UCL/UMR and other tenure as required;*
- *Agreement and 'sign-off' between responsible agencies for treatment of risk;*
- *Recording schedules and treatment by all agencies in IBRMS;*
- *Review plan and process⁹⁹.*

The process as laid out above appears to the Special Inquiry to have a lot of merit. **However the Special Inquiry is concerned that this process and the broader IBRMS has been developed entirely 'in-house' by FESA.** It seems obvious to the Special Inquiry that the development of a system that is intended to be an **integrated** and **tenure-blind** bushfire risk mitigation system should at the very least be the subject of extensive discussion at the IBMC and the Sub-committee, given the apparent overlap in their respective objectives.

⁹⁹ Submission of the Fire and Emergency Services Authority

However a review of the minutes of both of these bodies by the Special Inquiry indicates that while a presentation of 'local government bushfire fuel load management initiatives being developed by FESA' was scheduled for the Sub-committee meeting of 21 June 2010, this presentation did not go ahead and it appears it was never subsequently followed through. Neither DEC, nor any of the local governments spoken to by the Special Inquiry were aware of the development of the IBRMS prior to the Special Inquiry raising it with them.

The Special Inquiry is concerned that this lack of co-operation is reflective of a broader mindset among FESA management that is focused on controlling and 'owning' work programs that would be more effectively and efficiently addressed by a collaborative approach. That FESA has been working on its own IBRMS since before June 2010 without any consultation with DEC or local government is indicative of a lack of commitment to cooperation and stands in stark contrast to the purpose of both the IBMC and the Sub-committee. In its submission, FESA proposed to the Special Inquiry that it:

Recommend to Government the adoption of the FESA Integrated Bushfire Risk Management System (IBRMS) underpinned by the Bushfire Threat Analysis methodology as the basis for all bushfire mitigation planning and reporting in the future.

However given FESA's lack of consultation, **the Special Inquiry could not satisfy itself that the IBRMS is the most effective mechanism for progressing a tenure-blind approach to fuel load assessment and management.** The lack of consultation with partner agencies is thought by the Special Inquiry to be a considerable flaw in the system's development, given the significant responsibilities of DEC and local government with respect to bushfire mitigation and response in WA. **It also ignores opportunities to save money capitalising on existing WA Government capabilities.**

The 'in house' approach pursued by FESA neglected the opportunity to incorporate DEC and local government's knowledge of the land under their management and gives rise to the potential for expensive and unnecessary duplication across government agencies. This point was illustrated to the Special Inquiry when, in the course of its enquires, it became aware of the Spatial Support System that DEC uses which appears to have a very similar application as the IBRMS.

The Special Inquiry understands that this system is also already in use by some FESA operational staff and certain local governments (in addition to DEC). The Spatial Support System draws on datasets stored in Landgate's Shared Land Information Platform (SLIP) and utilises open-source software to minimise costs.

While predominantly a system that allows DEC to track and monitor its frontline resources, it also incorporates a map production tool to generate standard mapping products and a data capture tool¹⁰⁰. These features can be used to display layers of information (such as fuel load, if the data set was available) in an integrated map in much the same way as the IBRMS.

Recommendation 21

The Fire and Emergency Services Authority, the Department of Environment and Conservation and local governments jointly develop a single, integrated system for fuel load assessment and management.

The system should enable public access to allow members of the community to access information about the fuel load in a given locality.

Recommendation 22

The State Government ensure that the continued development of the Fire and Emergency Service Authority's Integrated Bushfire Risk Management System is dependent on an independent comparative assessment of its functionality and cost-effectiveness against the Spatial Support System used by the Department of Environment and Conservation.

Recommendation 23

The Interagency Bushfire Management committee develop and oversee a work program to:

- conduct site specific assessments to assess current fuel loads
- assess, analyse and prioritise bushfire risk on land within and adjacent to communities
- develop a three year rolling mitigation works program with annual implementation and review.

This work should commence independently of any decision on the most effective online integrated system. All data collected should be uploaded to the SLIP.

¹⁰⁰ Follow-up information provided by the Department of Environment and Conservation, 3 June 2011

3.3 THE FIRE

Weather Conditions on 6 February

The first indications of potentially adverse fire weather conditions on the weekend of 5 and 6 February 2011 were reflected in the Perth Metropolitan forecast issued by the BOM at 4.30pm on 30 January which predicted a 'sunny, windy morning' on Saturday. A subsequent forecast issued on 31 January forecast windy mornings on both days and at its weekly teleconference with FESA on the morning of Thursday 3 February, the BOM outlined the potential for adverse fire weather conditions across the weekend¹⁰¹.

On Saturday 5 February, a Fire Danger Index (FDI) of 60 was forecast for the Metropolitan Hills subdistrict. The FDI is calculated as a function of the temperature, wind, relative humidity, curing rate and fuel loading to forecast Fire Danger Ratings in accordance with the table below:

Table 4: Fire Danger Ratings

Fire Danger Rating	Grassland Fire Danger Index Range
Low-Moderate	0 – 11
High	12 – 31
Very High	32 – 49
Severe	50 - 74
Extreme	75 – 99
Catastrophic	Greater than 100

Note: The lower limit for *Very High* on the Meter is 32 by agreement with FESA, 25 is used in other states. By agreement with DEC and FESA, the fuel loading used in FDI calculations is set to 4.5t/ha throughout WA.

A fire weather warning for 6 February was first issued at 3.30pm on Saturday 5 February and was reissued at 4.25am on Sunday morning. Both warnings indicated a Severe Fire Danger Rating for the Metropolitan Hills subdistrict; which includes the Kelmscott/Roleystone area. The fire weather warnings stated:

FESA advises that if a fire starts and takes hold it will be unpredictable, move very fast and be difficult for firefighters to bring under control. Read through your bushfire survival plan. If you do not have one, decide what you will do if a fire starts. If you are not prepared to the highest level, leaving bushfire risk areas early in the day is your safest option. Homes that are prepared to the highest level, have been constructed to bushfire protection levels and are

¹⁰¹ BOM, op.cit., 6 April 2011, p.34

*actively defended may provide safety. You must be physically and mentally prepared to defend in these conditions*¹⁰².

In light of these forecasts, FESA declared a Total Fire Ban for 6 February in accordance with Section 22A of the *Bush Fires Act 1954 (WA)*.

Information provided to the Special Inquiry by the BOM indicate that strong easterly winds were sustained throughout 6 February, averaging close to 40km/h between midday and 3pm and before reducing slightly to between 25 and 35km/h at 6.00pm. Wind direction tended about 10 degrees south of east until around 5pm before settling due east. Peak wind gusts at the fire site were estimated to have been between 70 and 80km/h¹⁰³.

Ignition

FESA's draft Major Incident Review (MIR) indicates that during the late morning of 6 February 2011, a fire was ignited in the front yard of a private property on Brookton Highway, Roleystone by a person allegedly operating an angle grinder while undertaking metalwork at his home. The formal cause of the fire was investigated by FESA and determined as 'accidental'. Fire Investigation reports have been prepared by FESA and the Western Australian Police (WAPOL). An off-duty police officer has been formally charged under section 22B(2b) of the *Bush Fires Act 1954 (WA)* which states that a 'person must not carry out an activity in the open air that causes, or is likely to cause, a fire'¹⁰⁴.

Fire Spread

The following account of the fire spread and behaviour in Roleystone-Kelmscott bushfire draws heavily on a report prepared by Dr Lachlan McCaw of the Department of Environment and Conservation¹⁰⁵. It is supplemented by witness accounts provided to the Special Inquiry by residents of the area and information provided by FESA through its submission and draft MIR.

The fire started around 11.30am and spread with the prevailing winds in a westerly direction, remaining north of the Brookton Highway until the Stony Brook where it extended to the southern side of the highway. FESA's Communications Centre advised that the fire had extended to the southern side of the highway by 12.30pm. Properties on Scott Road were also reported as being threatened by fire at this time. To reach this point the headfire had therefore travelled at least 0.5km in 20 minutes,

¹⁰² Ibid., p.34

¹⁰³ Ibid., pp.14-15

¹⁰⁴ Ellis, S (2011) *Major Incident Review* (9 May 2011 draft) Unpublished work, p.20

¹⁰⁵ McCaw (2011),op.cit.

indicating an average rate of spread of 1500m/hr, mostly through private property with a significant cover of remnant native forest¹⁰⁶.



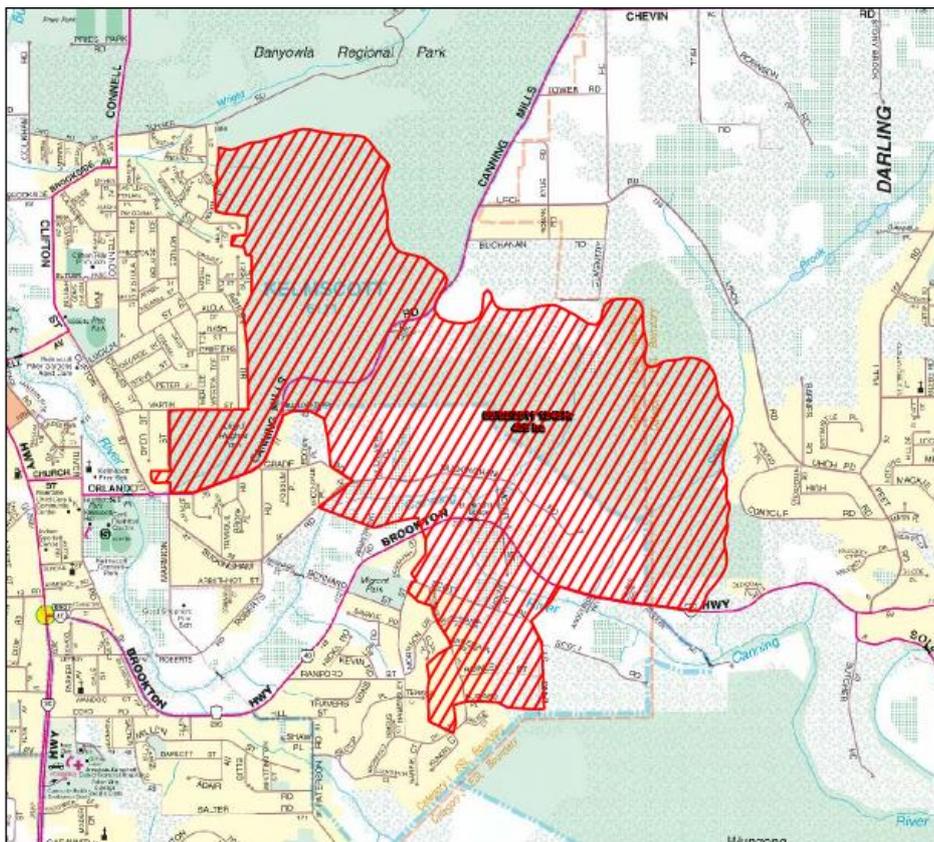
Fire burning downhill into the wind on southern side of valley¹⁰⁷

South of Scott Road, the spread of the fire was strongly influenced by the steep terrain and north easterly exposure through the well-vegetated residential area adjoining Bromfield Drive. Analysis of the post-fire aerial photography suggests that spotting played an important role in the propagation of the fire as it spread westwards from Scott Road, across the Canning River and into the residential area adjoining Roberts Road, Buckingham Road and Grade Road. The fire is likely to have impacted the Roberts Road and Grade Road areas between 1pm and 1.15pm. The FESA Communications Centre log recorded houses burning at Tranquil Place and Roberts Road on the south-western extremity of the eventual fire perimeter by 1.33pm. **These properties were almost certainly ignited by spotting¹⁰⁸.**

¹⁰⁶ Ibid., p.8

¹⁰⁷ Photograph courtesy of Leissa Hanley

¹⁰⁸ Ibid., p.8

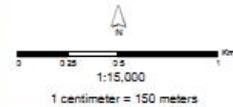


ROLEYSTONE CONTROL
Incident: 173393
9 Feb 2011
1300Hrs

Fireshape as at 1245 09022011

Legend

 **Approx Burnt Area**
1245Hr 09022011



109

This account is supported by the evidence of Mr and Mrs Ed and Leonie Donnes, residents of Grade Rd who stayed to defend their property and succeeded in not only protecting their own home, but also that of their neighbor. In their appearance before the Special Inquiry, Mr. and Mrs. Donnes explained they were impacted by the fire at 1.30pm. They provided home video footage in which the fire could clearly be seen to be travelling very rapidly and ‘spotting’ considerable distance ahead of itself.

North of Brookton Highway the fire spread through properties adjoining Buckingham Road which carried a mixture of grazed pasture and remnant forest. The general upslope in terrain on the northern side of the highway would have increased the flankfire rate of spread into the Banyowla Regional Park. The FESA Communications Centre log has a report at 1.22pm of flames west of Contour Road near the junction with a water supply pipeline track, indicating that by this time the fire had spread about 500m north of the point of origin. This represents a flankfire rate of spread of 430m/hr¹¹⁰.

¹⁰⁹ Map taken from the Submission of the Fire and Emergency Services Authority, p.108

¹¹⁰ Ibid., p.9



Burnt out area in Banyowla Regional Park – 7 February 2011¹¹¹

Dr McCaw goes on to say that spotting is also likely to have carried the fire across Canning Mills Road into Lloyd Hughes Park where it is likely to have coalesced into a relatively continuous flame front again. An analysis of the post-fire air photography suggests that the most intense fire behaviour was in the north west corner of the park near the junction of Marmion and Martin Streets. This is consistent with a fire spread under the prevailing easterly winds. The earliest report of fire threatening properties in the Clifton Hills area of Kelmscott is at 2.16pm, slightly more than 2 hours from the commencement of the main fire run. The distance travelled between 12.10pm and 2.00pm is 2.8km, indicating an average rate of spread of 1.6km/hr¹¹².

Analysis of the fire spread after 2.30pm reveals a distinct path of very intense fire that extended from the northern side of Buckingham Road near Rock View Place in a northwesterly direction across Canning Mills Road and to the crest of the escarpment. Open forest within the path of this fire run was completely defoliated by crown fire. Steep south east facing slopes on the southern side of Canning Mills Road are likely to have been a major contributing factor to this intense fire run, which appears to have taken place after the fire had impacted on the properties west of Lloyd Hughes Park.

Spotting generated during this fire run would have led to multiple ignition points on the western slope of the escarpment and in the residential area of Clifton Hills around Sunset Terrace and Morundah Place. The escarpment area above Clifton Hills is likely to have burnt rapidly and in a complex pattern because of the

¹¹¹ Photograph courtesy of Max Margetts

¹¹² Ibid., p.9

interacting effects of multiple ignition points, steep slopes and fire approaching along the contour from the south east under the influence of the prevailing wind. The first report of fire threatening houses in the northern part of Clifton Hills was at 3.10pm¹¹³.

FESA's draft MIR indicates that the Incident Controller of the Roleystone-Kelmscott fire was first notified of the loss of the Buckingham Bridge at 3.15pm. The draft MIR explains that 'the Buckingham Bridge was identified as key infrastructure, but was subsequently lost'¹¹⁴. However, the Special Inquiry found that there is evidence to suggest that the bridge was only identified as critical infrastructure after it was fully involved in fire and beyond salvage. This issue is discussed further in Chapter 4.

There is limited information about the spread of the fire in the Banyowla Regional Park during the remainder of the afternoon. Diary notes kept by DEC officers who attended the scene record containment of the northern flank of the fire, west of Canning Mills Road occurred at about 10.45pm, approximately eleven hours after the commencement of the fire¹¹⁵. Dr McCaw concludes his report with the following summary:

The Kelmscott-Roleystone bushfire developed rapidly from about 12.10pm on 6 February 2011 under conditions of Very High fire danger in forest and grassland fuels. Almost immediately the fire began impacting residential areas adjoining the Brookton Highway. The direction of the fire spread was clearly dominated by the strong easterly winds which were reinforced by the orientation of the topography along the valley of the Canning River. By 2.00pm the fire was well established in the Lloyd Hughes Reserve and was impacting properties in the southern section of the Clifton Hills residential area. Reconstruction of fire spread indicates the Banyowla Regional Park was burnt by flanking spread upslope from Buckingham Road, and by a fire front that spread in a northwesterly direction across Canning Mills Road under the dominant influence of localised steep slopes...Spotting appears to have contributed significantly to the propagation of the fire and the ignition of buildings.

¹¹³ Ibid., p.10

¹¹⁴ Ellis, op.cit., p.21

¹¹⁵ McCaw (2011), op.cit., p.10

CHAPTER 4: THE RESPONSE

4.1 ATTENDING THE FIRE



Fire trucks attending the fire – 6 February 2011¹¹⁶

Initial Response and Instructions Given to Firefighters

On Saturday 5 February 2011 at 9.14pm a fire was reported via a triple zero call to emergency services to be burning in the vicinity of Toodyay Road and Roland Road, Gidgegannup. In this report, as elsewhere, this fire is referred to as the 'Red Hill' fire.

In evidence given to the Special Inquiry, it was ascertained that a total of 53 fire appliances attended this fire which burned through to Sunday 6 February.¹¹⁷ According to evidence provided to the Special Inquiry the significance of this fire was not known until about midnight.

The Roleystone fire was reported via triple zero phone calls at 11.42am on Sunday 6 February 2011. The path of the fire is described in Chapter 3 but importantly, it was thought the fire was successfully extinguished by midday through the efforts of the first responders. Four fire trucks from Armadale, Roleystone and Bedforddale had attended and successfully dealt with the initial blaze by 12.03pm. The swift attendance by the firefighters is to be commended.

¹¹⁶ Photograph courtesy of Jos Mensink

¹¹⁷ Hynes, C – Hearing 29 March 2011

Unfortunately however, a spark from the initial blaze had escaped and started another fire which ultimately became the Roleystone-Kelmscott fire. This fire was first reported by the fire fighters themselves at 12.10pm. At 12.14pm a request was made to warn residents that the fire was not under control.

In accordance with standard procedures calls were made for additional resources and, again in accordance with procedures, an Incident Co-ordination Centre was established and an Incident Controller, District Officer, Mr Paul Ryan was appointed to take charge from a local officer. Mr Ryan subsequently gave evidence to the Special Inquiry. Mr Ryan is an accredited Level 3 Incident Controller.

Fire brigades identify the severity of a fire by allocating a 'number of alarms'. For example, the draft MIR described the situation at Roleystone:

At 12:13 a request to upgrade the incident to a 3rd Alarm was made along with aerial resources and additional appliances.....by 13:08 ...the Incident Control Point (ICP) relocated to the Roleystone Fire Station and the incident upgraded to a 4th Alarm¹¹⁸.

The Special Inquiry received evidence from various witnesses that there is no correlation between the terminology used by fire brigades in respect to an Alarm Number and the Incident Levels used for Emergency Management purposes as discussed in Chapter 2.

During inter-agency operations it may be confusing having alarm levels and incident levels that do not correspond. Although not a recommendation, some thought may be given to aligning the terminology through discussion at the Interagency Bushfire Management Committee.

As mentioned above, several Volunteer BFBs attended the fire from the outset. Mr David Gossage is the Bushfire Control Officer and Emergency Services Manager for the Shire of Jarrahdale/Serpentine and was part of the incident Management Team. The Special Inquiry took the opportunity to speak to a number of senior officers from his Shire as well as the Bedforddale and Jandakot Volunteer Bush Fire Brigades.

All of these officers described the Roleystone-Kelmscott fire as being significant but offered alternative suggestions as to how it was handled. There is a strong feeling amongst the volunteer brigades that their experience with bushfire is quite different

¹¹⁸ Ellis, S (2011) *Major Incident Review* (9 May 2011 draft) Unpublished work.

to the fighting of 'structural fires' by career fire officers at FESA. As Mr Gossage stated¹¹⁹:

...they're trained to handle structure fires and that sort of thing, so their understanding to tackle a bushfire isn't there.

However, he went on to say:

...I mean, if we turned out to a structure fire, you wouldn't see me walking into a structure fire.

The Special Inquiry was advised of bushfire training that forms part of the training provided to all Fire and Rescue Service firefighters.

However, the importance of raising this is that the Special Inquiry spoke to a number of volunteers and residents who believe that the way the fire was attacked caused problems in that it spread beyond what might have been possible to contain. The Special Inquiry recognises that some people, particularly those who have suffered the loss of property, will hold these views, and was not in a position to make a determination one way or the other.

Mr Paul Ryan gave evidence¹²⁰ about some of the early decisions that he, as the initial Incident Controller, made after being present at the fire for about an hour:

Because every incident we have is two – main two issues, food and communications is always the key issues that are always determined. So, we set up a command channel and control channels, so what happens is at the ICV – we call it ICV – is that we have a command channel, so – and then our divisional commanders talk to us on the command, and the control channels work further down on the sector channels. So we establish up through there, so what I did is I communicated that objective at 1320 hours. I communicated to both divisional south and north, and said, 'Our objective of incident has now changed. You will now protect life.' Then they brief their sector commanders and seek answers back from sector commanders that they understood that the objectives have changed.

As discussed in the next section, the focus on 'saving lives' was beyond doubt the priority given by order to the firefighters present at the fire. The direction given by Mr Ryan was apparently acted upon to the exclusion of other considerations. Having said that, it is important to protect the lives of fire fighters that a highly disciplined approach is taken when orders are given as the organisation must adhere to Occupational Health and Safety requirements.

¹¹⁹ Gossage, D – Hearing 17 May 2011

¹²⁰ Ryan, P – Hearing 9 May 2011

As an example of how the order was received and acted upon, a resident, Mr Ed Donnes spoke about his experience with FESA officers around 8pm on the Sunday night 6 February. This was well after the main fire front had passed through. He and his wife Leonie live on Grade Road, Kelmscott and remained behind to fight the fire and had not seen any firefighters before that time¹²¹. Mr Donnes described his interaction with FESA firefighters:

...I did see FESA trucks on the road (around 8pm) ...which I made contact with a couple of them - disappointing contact.... There was a fire truck parked on our crossover from the road to our property, and he was just parked there...I had to actually go up and ask him could he move his truck just forward so I could get out of my driveway...I said, 'There's a house started to burn on our boundary' and his response was, 'It's too late now'.

Mr Donnes went on to describe how, shortly after, he noticed a power pole on fire so he stopped a FESA vehicle and said:

'Could you go and put that out?'

The FESA officer replied according to Mr Donnes:

'We're here to save lives and not property'

Later that evening (around 10.00pm) some FESA officers came up the driveway to the Donnes' residence and Mr Donnes asked the officers to put out a fire in a log next to the driveway which was again declined by the officers.

Mrs Donnes described her reaction¹²²:

We should say that these trees that were burning right next to the driveway, because of the speed of the wind, and the embers were being sent all over the Kelmscott district – I mean, right into the urban areas, and, I mean, they were travelling hundreds of metres, so we felt that, you know, it wasn't a frivolous request that we ask them, you know – and they were in a full fire tender; it wasn't a small vehicle or anything. But they kept saying, you know, 'We're here to save lives and not property.' So I guess you could say that we were a little disappointed with their reaction. It probably wasn't what we expected; let me put it that way...

¹²¹ Donnes, E – Hearing 6 May 2011

¹²² Donnes, L – Hearing 6 May 2011

Mr Donnes was careful not to present his experience or that of his wife, as typical. He went on to say:

...I do know a lot of instances where people, you know, were very grateful, and people got support etcetera, but from our perspective it didn't happen.

Another person who remained behind to fight the fires was Mr Jos Mensink also a resident of Grade Road, Kelmscott. In evidence, it was ascertained that Mr Mensink accompanied by his son and another friend extinguished fires and saved seven to ten homes during the fires. More details of this are provided in later sections but Mr Mensink had a similar experience to Mr and Mrs Donnes.

In evidence, Mr Mensink stated¹²³:

So on the corner of Canning Mills Road and Grade Road, one of the poles started burning. That one is the main pole that supports the infrastructure coming from Grade Road and so I tried to put some sand on it, but that wasn't enough, so it started to burn again. And then I mentioned it to a fire brigade, and he said, 'No, mate, we don't put that out, you know. We need to save lives, mate.' Similar sort of comments.

Concerns were raised by other residents that instructions given to the firefighters to protect life were carried out to the exclusion of other considerations. As one resident put it to the Special Inquiry at a Community Meeting on 13 March, 2011:

If the policy is to evacuate us from our homes: what lives are left to save because nobody is home. Why couldn't they put the fires out?

Two firefighters from the Balingup Bushfire Brigade raised the following point with the Special Inquiry in regard to the Roleystone fires:

Instruction was given that priority be given to protection of life, rather than property. This is standard instruction to fire fighters, but if carried too far, can arguably result in unnecessary loss of property. It is felt that this may have happened in the case of the Roleystone fire.¹²⁴

As mentioned in Chapter 1, the Special Inquiry noted the findings of the London Coroner who was commenting upon a similar dilemma where there is a tension between emergency response and employer/employee responsibilities¹²⁵.

¹²³ Mensink, J – Hearing 18 May 2011

¹²⁴ Bailey, C & Cooper, D – Memo included in the Submission of the Locals Against Wildfire Inc.

¹²⁵ Hallet, Lady Justice (2011) *Coroner's Inquests into the London Bombings of 7 July 2005*

Arguably, the LFB (London Fire Brigade) would be failing in its duty if it failed to train its officers in risk assessment or its fire-fighters to follow orders. If a fire officer allowed individual fire-fighters to follow their instincts and rush into a dangerous situation, ill prepared and ill equipped without proper back up, and lives were saved, no public criticism would follow. However, if the officer did the same and someone died, the officer or their organisation could find themselves in the dock facing criminal charges or in a civil court facing a claim for damages. As one LFB witness put it rather ruefully: 'it all depends on the result'.

Recommendation 24

The Fire and Emergency Services Authority convene a facilitated debriefing session between the families who remained behind to protect their properties, and the incident controllers.

This session should include open discussion and explain the decisions of all parties – including how the incident controllers determined priorities, and why residents chose not follow their advice to evacuate.

The learning outcomes should be promulgated across all agencies and incorporated in future level 3 incident controller training programs.

It is not a simple decision for firefighters on the ground as the Fire Control Officer from the Bedfordale Brigade, said in evidence:

....myself was told not to do anything; just protect life. In some cases you can take the spot fires and slow the rate of spread down, but in a lot of cases too, it's deciding where you are going to use your thousand litres of water. Are you going to expel it on a bit of bush that's going to burn in five minutes time and not have the necessary resources behind you to stop the actual fire? Or do you keep it in case it turns into an area where it is going to hit a house or life.

The Special Inquiry called evidence from one of the two State Duty Officers on duty for the Red Hill and Roleystone-Kelmscott fires, Mr Chris Arnol. Mr Arnol has extensive experience as a firefighter in Tasmania and other states of Australia, particularly Victoria and NSW. He has over thirty years experience. Mr Arnol won a Churchill Fellowship and his area of study is firefighting in the urban interface. Mr

Arnol joined FESA two years ago and was considered a credible witness. He stated¹²⁶:

...tactical command training, where the hard decision to make is, 'That house has got fire in it, I have to leave it.' This is very hard for an urban firefighter to do; he is used to actually putting those houses out.

Mr Tim Mills of the Success fire station also spoke of the dilemma¹²⁷:

So we actually went past a lot of the fire with people screaming and shouting for help on the way, which obviously we can't deal with. We haven't been tasked. (To stop and give attention to property fires) That's not the idea.

Chapter 3.2 describes the stages of the fire. It was thought to be under some sort of control by 5.00pm according to Mr Paul Ryan who said that this was the time that the priority was moved from 'Saving Life':

Later in the day, I think it was about – I will just give you the time roughly when we decided that we had everything under control, so we could change that. That went – I think it was 1700 hours that day that that [the change of priority from saving life] occurred¹²⁸.

Two factors emerge from this aspect of the evidence of Mr Ryan. Firstly, Mr Mensick describes the main fire front passing over his house sometime after 1pm. He thought it lasted 15 to 20 minutes¹²⁹. It was after this time that he and his son and his son's friend set about putting fires out in neighbouring houses. The second aspect is that the evidence of Mr and Mrs Donnes indicates it was well into the night around 8.00pm and later when they had their conversations with firefighters who maintained that their objective was still to 'save life'¹³⁰.

The Special Inquiry considers that a rigid adherence to the 'primacy of life' edict creates a dilemma when critical infrastructure protection is ignored thereby potentially exposing other lives to even higher risks, including the firefighters themselves.

¹²⁶ Arnol, C – Hearing 10 May 2011

¹²⁷ Mills, Tim – Hearing 20 May 2011

¹²⁸ Ryan, P – Hearing 9 May 2011

¹²⁹ Mensink, J – Hearing 18 May 2011

¹³⁰ Donnes, E – Hearing 6 May 2011

Again looking at the Lady Justice Hallett's deliberations on this, it would seem to be a common dilemma¹³¹:

The answer to this problem seems to lie in the use of judgement, common sense and what the LFB (London Fire Brigade) call 'dynamic risk assessments'. I emphasise the work 'dynamic' is a reflection of the fact that the situation confronting a fire officer may change from minute to minute, second to second. Risk assessments and decisions may have to be revisited as protocols are overtaken by events.

Mr Paul Ryan and his team had established the Incident Co-ordination Centre (ICC) at the Roleystone Fire Station and it was from here the Incident Management Team (IMT) operated.

The draft MIR made the observation that while the Roleystone Fire Station was previously identified in planning by FESA as an Incident Co-ordination Centre, it was not appropriate for housing a full Incident Management Team so the fire station was ultimately supplemented by an Incident Co-ordination vehicle from where the entire operation was conducted¹³².

Evidence was provided to the Special Inquiry by Mr Tim Mills, a firefighter with FESA's Fire and Rescue Service who is a Station Officer at the Success Fire Station¹³³. Mr Mills' evidence is referred to elsewhere but he also expressed concerns about the appropriateness of these arrangements after being questioned by a Section Commander for not being where he was directed, however this appeared to be a communication breakdown. He said in evidence:

The incident control vehicle is a good vehicle. [But] Sometimes, because it's split into two, the front doesn't talk to the back and it depends on the crew at the time. It needs tidying up. I'm not sure how.

Invoking WESTPLAN-BUSHFIRE and Declaration of Incident Level

Chapter 2 discussed the processes by which fire incidents are dealt with at the emergency management level under WESTPLAN-BUSHFIRE.

The Special Inquiry was concerned that FESA had not followed WESTPLAN-BUSHFIRE, including not explicitly declaring the level of the incident. The Special Inquiry considered the determination of the incident level in some detail.

¹³¹ Hallet, op.cit.

¹³² Ellis, op.cit., p.21

¹³³ Mills, T – Hearing 20 May 2011

In evidence before the Special Inquiry, FESA's Chief Operations Officer Mr Craig Hynes gave the following answers in response to questions about the incident level attributed to the Red Hill fire¹³⁴:

Q: *..at what point in that Red Hill fire was it declared a level 3 incident?*

HYNES: *I discussed with the State – the State duty director first of all had spoken to the incident controller, and I had a conversation with him about 12.30. He had concerns about the fire being, you know, out – difficult to contain with the strong winds, and so we agreed that it was a level 3 fire, which meant that our State operation centre was then active.*

When asked about the incident level attributed to the Roleystone fire, Mr Hynes gave the following answers:

Q: *...What level incident was declared for the Roleystone fire?*

HYNES: *That was a level 3 incident...*

Q: *When was that declared?*

HYNES: *It was really when the first initial – I think the escalation started to occur at about 12.30, and I will just have a look. It would have been around the 1.30 mark that it was established that **the level of incident was significant.***

Mr Hynes was recalled to give evidence a second time on 10 May 2011 which will be set out shortly. By this time, the draft MIR had been prepared and received by the Special Inquiry and other witnesses had appeared to give evidence including the two incident controllers, Mr Gary Kennedy and Mr Paul Ryan. In evidence they stated:

Q: *.... just finally, going back to WESTPLAN Bushfire, what level was the incident declared?*

RYAN: *Three.*

Q: *And when was it declared a level 3 incident?*

RYAN: *We knew it had been declared at*

¹³⁴ Hynes, C – Hearing 29 March 2011

KENNEDY: Basically told – it was declared by appointment ‘This is a large incident, Gary. You better get going,’ and because.... of my status I won’t take over level 2s.

In that one statement, Mr Kennedy identified how FESA implements WESTPLAN BUSHFIRE and the declaration of Level 3 Incidents. It was not by declaration but by the appointment of Mr Kennedy to take over as the incident controller that FESA supposedly established the incident level of the Roleystone-Kelmscott fire.

This evidence given on the 9 March 2011 occurred after the Special Inquiry had asked a series of questions and made inquiries regarding the application of the State emergency management plans. It was evidence that had also been given during the preparation of the draft MIR. To his credit, Mr Paul Ryan then went on to say:

I think the situation is, if I can speak on that one there, is that having post-reviewed WESTPLAN Bushfire, it says that you’re supposed to advise level 1, level 2, and level 3. . . I made the incident fourth alarm, I probably should have at that stage said, ‘Level 3 incident.’

The evidence points to a problem with FESA management where it appears little or no regard is given to emergency planning as opposed to emergency response. It is clear from the phrase ‘post-reviewed’ that Mr Ryan had gone back to check on his understanding of the policies. As the first senior person in charge of the Roleystone-Kelmscott fires, it is apparent that he did not have a full appreciation of WESTPLAN-BUSHFIRE especially the consequences associated with the declaration of the incident level.

The State Duty Director, Mr Lindsay Cuneo, was asked questions about the declaration of the Level 3 Incident¹³⁵:

Q: If I just turn to WESTPLAN BUSHFIRE first. What incident level was the Roleystone bushfire?

CUNEO: It was clearly a level 3. It would have been classed as a level 3.

Q: Was it ever declared as such?

CUNEO: No, I don’t think so, not that I am aware of.

Q: Why not?

¹³⁵ Cuneo, L – Hearing 20 May 2011

CUNEO: *Good question. I suppose in a general context – and this goes back in history – we’ve never declared them as a level 1, 2, or 3. It’s not a decision or a statement that’s made, and it hasn’t been – and there isn’t a process in place for that to occur. That document (WESTPLAN BUSHFIRE) was produced, I think, in December 2010, and it makes reference to that, which also refers to obviously [SEMP] 4.1. But there isn’t arrangements in place for that and it never occurred, but it was clearly a level 3.*

The Special Inquiry finds it difficult to reconcile that the agency with responsibility for both the development and implementation of emergency planning for the State, did not follow their own plans. These plans were released in December 2010 following research by FESA into the outcomes of the Victorian Bushfires Royal Commission. Mr Cuneo continued in his evidence:

Q: *So FESA have the lead role in the development of a plan that comes out in December, the peak of the bush fire season, and you’re telling me that FESA senior executives didn’t follow the plan?*

CUNEO: *Well, that’s obviously correct.*

Q: *...the purpose of the plan, as I read it, is to trigger certain actions such as the meetings of OASGs and the meeting of SECGs: the briefing up of people because of the severity of the incident; would you agree with that?*

CUNEO: *Yes.*

Mr Hynes was recalled to give further evidence on 10 May 2011. Mr Hynes was again asked to indicate where it had been recorded or formally stated that the Roleystone-Kelmscott fire was declared a Level 3 incident in accordance with the policy. Mr Hynes responded:

There was no formal declaration of a level 2. There was no formal declaration of a level 3. In fact, we put all the necessary process and action in place that would indicate a level 3 incident.

Mr Hynes later went on to say¹³⁶:

...It is silent in WESTPLAN. I don’t think it detracted from all the action we took on the day.

¹³⁶ Hynes, C – Hearing 10 May 2011

Mr Cuneo¹³⁷ provided similar evidence on the last point when he said:

.....Did it have any impact on the outcome? And I not sure that it would have made any difference.

It was noted by the Special Inquiry that Mr Hynes' evidence and Mr Cuneo's evidence followed the evidence and admissions by Mr Ryan and Mr Kennedy, that there was no formal declaration of the incident level. It was also noted that there was a variation in evidence from Mr Hynes' first appearance before the Special Inquiry on 29 March 2011 and the response given on 10 May 2011.

Mr Hynes' statement that WESTPLAN-BUSHFIRE is silent on the declaration of incident levels is also wrong as the plan imposes a responsibility upon Incident Controllers:

*Incident Controllers will explicitly declare every incident one, two or three in accordance with the following table...*¹³⁸

The evidence of the FESA witnesses also conflicts with evidence given by the Western Australian Police (WAPOL) who said that the Red Hill fire was only a Level 2 incident.

WAPOL was advised of the initial fire at 11.55am and Police from Armadale attended and remained for the duration of the major fire. The attending Police from Armadale and other senior police officers were not clear on the declaration of the incident under WESTPLAN BUSHFIRE and in answer to the question on the level of the incident Police Inspector Bradley Sorell stated¹³⁹:

Well, my understanding was at 1530 hours that it – that it had been declared, I thought, Level 3...Now I'm not even sure that they ever did declare that it was a level 3, at any point, because it certainly, in my view, was treated – from a police perspective – as a level 1 incident.

Mr Mark Ryan, Strategic Policy Adviser from WAPOL stated¹⁴⁰:

..... that is of a little bit of concern to us. In 4.1 it lays down, clearly, how one classifies an incident: a level 1, 2 and 3. And when you trigger an incident, say, to be a level 3, it automatically says an SECG must meet. It automatically activates a number of things to occur. FESA, in this case, they had the Redhill fire earlier in the morning, they classify that as a level 2, they then classified

¹³⁷ Cuneo, L – Hearing 20 May 2011

¹³⁸ SEMC (2010), WESTPLAN BUSHFIRE, p.19, Section 4.3.1

¹³⁹ Sorrell, B – Hearing 11 April 2011

¹⁴⁰ Ryan, M – Hearing 14 March 2011

the Roleystone fire as a level 2, so they had two level 2 fires going simultaneously. Police, at the time, indicated that, well, you know, there was a metro wide impact occurring across both fires from a resourcing and a critical infrastructure perspective and that maybe a level 3 declaration might have been a better way to go at that point and that would have activated the SECG earlier.

When looking at this response from Mr Mark Ryan, it is clear that FESA management's application of the WESTPLAN BUSHFIRE involved very poor communication with other agencies. Evidence provided to the Special Inquiry by Mr Hynes on 29 March, 2011 stated that the Redhill bushfire was declared a Level 3 Incident at 12.30am on the Sunday morning 6 February 2011¹⁴¹ which **leads to the conclusion that WAPOL was not made aware of the incident level of either fire.**

This conclusion is supported in evidence given to the Special Inquiry by the Commissioner of Police Mr Karl O'Callaghan¹⁴²:

I mean, if I'd had the information earlier I would have suggested that FESA called it (the meeting of the State Emergency Co-ordination Group) earlier in the day.

This is relevant because had WAPOL been advised the Red Hill fire was 'declared' a Level 3 incident in the early hours of Sunday 6 February, 2011, the Commissioner of Police may have acted earlier to call a SECG meeting when first advised of the Roleystone fire. As Chair of the SECG he was denied this opportunity because FESA did not adhere to the requirements of WESTPLAN-BUSHFIRE.

As the Special Inquiry's interest in the declaration of the level of incident for the Roleystone fire became known, FESA witnesses before the Special Inquiry recognised that there was in fact **no declaration of incident level for the Roleystone fire** and began giving evidence along those lines.

The Special Inquiry was not satisfied with the draft MIR's treatment of the issue. It states:

The MIR was advised that WAPOL had an expectation that they would have been formally advised that a Level 3 Incident had been declared. In essence, WAPOL were seeking clear advice that the incident had escalated to a major level. The MIR reviewed the State Emergency Management Policy 4.1 (SEMP 4.1), there is no stated expectation of a declaration across agencies

¹⁴¹ Hynes C – Hearing 29 March 2011

¹⁴² O'Callaghan, K – Hearing 14 March 2011

*as to the level of the incident whereas Westplan Bushfire does refer to the IC declaring the level of the incident*¹⁴³.

This statement downplays the importance of declaring the incident level and the explicit requirements set out in WESTPLAN-BUSHFIRE.

The Victorian Bushfires Royal Commission addressed the training and evaluation of Level 3 Incident Controllers. This is discussed further in Chapter 6, but the following exchange with the Incident Controllers for the Roleystone-Kelmscott fire is telling when you consider the decision to evacuate residents is made by the person holding that position.

In evidence, Mr Kennedy and Mr Ryan gave the following exchange on the issue¹⁴⁴:

KENNEDY: Yes. It's real bad, get going, means level 3.

RYAN: But I don't know if that's formalised anywhere, though, is it?

KENNEDY: It's not formalised....But that's an informal discussion.

As pointed out by Mr Mark Ryan, the Strategic Policy Advisor from WAPOL, the declaration of the Incident level triggers the co-ordination of other agencies at a senior level. It is not so much an issue of oversight, but one of co-ordination and partnership.

The Department of Environment and Conservation has fire fighting responsibilities and capabilities as discussed elsewhere in this report. In contrast to the events outlined in this section, DEC appears to have a much more accountable system in applying WESTPLAN BUSHFIRE.

DEC has an 'Incident Escalation Report' that has to be completed by the Regional Duty Officer in consultation with the District Duty Officer and the Incident Controller. The form complies with the requirements of WESTPLAN BUSHFIRE and, in addition to detailing the time of the assessment of the incident level, the form provides a good contemporaneous record of incident assessment. A copy of the DEC Incident Escalation Report is attached at Annexure 6.

¹⁴³ Ibid., p48

¹⁴⁴ Kennedy, G and Ryan, P – Hearing 9 May 2011

Recommendation 25

It is recommended that the Fire and Emergency Services Authority immediately comply with the provisions of WESTPLAN BUSHFIRE and formally declare incidents at their appropriate level and document and communicate those decisions in a similar way to the systems used by the Department of Environment and Conservation and the Western Australian Police.

Resources Used to Fight the Fire

At 2.00pm on the Sunday afternoon, Mr Gary Kennedy, another accredited Level 3 Incident Controller, was appointed to the Roleystone fire to take over from Mr Ryan. Enroute to the fire, Mr Kennedy organised additional resources to attend the fire. In evidence he stated:

And on the road we put together a few more resources to go there, because it was quite obvious it was quite an extensive fire. We also put in play to put task forces in from the country, so we identified a resource from Northam to start work on that initially. We started working on a resource to come out of Bunbury, and we had already started discussing – with talks on the availability of staff out of Geraldton. So I put extra resources on the road from my visuals and my communications I had with a number of areas.

These arrangements, while perhaps very appropriate, appear to go outside the normal processes because there is no reference to any other authority such as the State Duty Director as will be discussed in the section 4.4. When asked about his authority to call resources from other parts of the State, Mr Kennedy said¹⁴⁵:

I do that. A little bit over and above my true authority, because at that stage Paul is still in charge of the job, but knowing that I will be taking it over and knowing the discussions I already had, and the pressure that Paul was under then– it was deemed that I could actually make some extra calls.

The resource allocation is important because the Special Inquiry was told that there seemed to be insufficient resources at the Roleystone-Kelmscott fire. Therefore, the Special Inquiry attempted to establish how a decision is made on the relative severity of two fires burning simultaneously and how resources are apportioned to each fire.

In its consideration of the issue, the Special Inquiry gave reference to the Spatial Support System (SSS) employed by DEC which allows it to track and monitor its

¹⁴⁵ Kennedy, G – Hearing 9 May 2011

frontline resources such as aircraft, plant, heavy fleet, light fleet and boats. The Special Inquiry understands the SSS uses satellite communications to relay positional data which are managed via a web-based mapping application for display of positional information in near real time¹⁴⁶.

It became apparent to the Special Inquiry that FESA does not utilise the SSS or an equivalent system that would enable it accurately track the deployment of its resources. In its submission on this issue DEC explained that its resources are tracked by the installation of fixed or portable tracking units, that:

...can be easily installed in light fleet or external agency fleet, e.g. contractor machines, WA Police of FESA vehicles.

The Special Inquiry sees considerable merit in the SSS and in the development of a single, integrated resource management system used by all agencies with fire responsibilities in WA. This is discussed further in Chapter 5.

However, in the case of the Red Hill and Roleystone-Kelmscott fire, the Special Inquiry was unable to clarify the issue of FESA's resource allocation because of the nature of evidence provided by Mr Hynes as will be further discussed in this chapter.

Q: What I'm asking you is how do you work out how much resource to send to a fire?

HYNES: Well, it's based on the AIIMS system. The AIIMS system is an incident controller requests resources based on his strategies. His strategies were about using a combination of direct attack, defensive strategies on the urban interface, and also earthmoving equipment to stop the spread of fire. . .¹⁴⁷.

Q: ...who made the decision to send the total number of resources to the Red Hill fire that was sent?

HYNES: Yes well, as I am saying, that is a function of the AIIMS system. The incident controller and the incident management team based on their strategies.

The difficulty with this response from Mr Hynes lies in the fact that there were no recorded strategies documented by either of the two Incident Controllers. Once the Incident Management Team is established the Incident Controller is required to

¹⁴⁶ Follow-up information provided by the Department of Environment and Conservation, 3 June 2011.

¹⁴⁷ Hynes, C – Hearing 29 March 2011

document their Strategies and Tactics; Alternative Strategies; Risks; and Safety Issues on what is known as an Incident Action Plan.

A copy of the Incident Action Plan for the Roleystone fire was sought by the Special Inquiry. For the main part the form for the period from 1.00pm to 6.00pm is completely blank except for the words '*Protect Life – Property*' (Annexure 7).

There is no mention in the Incident Action Plan about evacuation of residents, threats to critical infrastructure such as the Buckingham Bridge or other relevant details. The Special Inquiry found this lack of detail unacceptable especially considering the decisions made on the day of the fires.

Details about the weather conditions were inserted onto the Incident Action Plan but no tactics or alternative strategies or risks were identified.

This lack of documented planning by the Incident Controllers is reflected in evidence from a number of witnesses who stated that there was disorder in the IMT without any proper planning in place for at least the first two hours of the fire¹⁴⁸.

This situation left the Special Inquiry with the conclusion that, in the absence of better planning documentation, no determination could be made to ascertain whether too many houses were evacuated. This, coupled with the order 'to protect life' interpreted by some firefighters to mean 'not property', could mean that where spot fires were not attacked and homes were empty, the total impact of the fire may have been different. We will never know.

The Special Inquiry looked at the Incident Action Plan for the Red Hill fire which stands in stark contrast to the one prepared for the Roleystone fire. This suggests inconsistencies in application of response planning.

The Special Inquiry heard evidence and received information about Fire Behaviour modelling being conducted at the University of Western Australia with FESA as well as research undertaken by the Bushfire Cooperative Research Centre. This research should assist Incident Management Teams determine the total area to be evacuated by Incident Controllers into the future.

Mr Cuneo was offered the opportunity to look at the Incident Action Plan provided by FESA and in his evidence he stated:

*An incident action plan is obviously planned details, a whole range of strategy objectives, tactics and a whole range of different things that's been in place, and that has been around for many a year.*¹⁴⁹

¹⁴⁸ Gossage, D – Hearing 17 May 2011; Fancote, G – Hearing 6 May 2011

¹⁴⁹ Cuneo, L – Hearing 20 May 2011

When presented with a copy of the primarily blank Incident Action Plan Mr Cuneo offered the excuse that there was little intelligence coming from the fire ground which might account for the lack of detail in the plan. The problem being that by this time, the Buckingham Bridge had burnt down closing the Brookton Highway and large numbers of houses had been evacuated.

According to the evidence of Mr Paul Ryan the incident was under control by 5.00pm.

So in effect, **the Incident Action Plan offered no description of the first five hours of the Roleystone fire other than the words ‘Protect Life – Property’ which the Special Inquiry would expect is the strategy for every fire attended by FESA.**

Recommendation 26:

The Fire and Emergency Services Authority develop formal procedures for mandating the completion of Incident Action Plans, ensuring the documents are detailed and that they record critical decision making.

It is evident from the Incident Action Plan that once Mr Paul Ryan was relieved as the Incident Controller he assumed a planning position. That is to say, he was not appointed as a Deputy Incident Controller. According to the Incident Management Team member lists¹⁵⁰ and the Command/Communications Structure from 1800 hours¹⁵¹ provided to the Special Inquiry by FESA **there was no deputy incident controller for the Roleystone-Kelmescott fire.**

This is in contradiction to agreement reached by the Interagency Bushfire Management Committee Representative Group in October 2010 that all Level 3 Incident Management Teams would include a Deputy Incident Controller¹⁵² as described in Chapter 2. This decision was enacted in the revised WESTPLAN-BUSHFIRE which says:

Level 3 IMTs must include a Deputy Incident Controller¹⁵³.

¹⁵⁰ *IMT Members for Incident 9729 as recorded in IMS, FESA Incident No 173393* – the list of members and positions makes no reference to a Deputy Incident Controller

¹⁵¹ *Command/Communications Structure– Period of Plan from 1800 hours 06/02/2011* – the Deputy Incident Controller box on the form is blank and Mr Ryan is listed as Operations Officer

¹⁵² Minutes of IBMC Representative Group Meeting 25 October, 2010 p.4

¹⁵³ SEMC (2010), WESTPLAN-BUSHFIRE, op.cit., p.18

Evidence given by Mr Kennedy and Mr Ryan confirm that no Deputy Incident Controller was appointed to the Roleystone fire. At their hearing on 9 May 2011 the following evidence was given by Mr Kennedy¹⁵⁴:

Q: *...is there a deputy incident controller automatically appointed?*

KENNEDY: *You can have a deputy incident controller. We didn't on this job....*

However, Mr Hynes gave contrary evidence at his hearing on 10 May 2011¹⁵⁵:

The original incident controller was Paul Ryan, who then assumed the role of deputy incident controller, but I understand he also took an operations role too.

When it was pointed out to Mr Hynes that his evidence was contrary to that given by the two Incident Controllers, he stated:

Well, I was aware of deputy incident controllers being appointed, so I certainly have to follow up on that evidence that they gave with you – gave to you.

The draft MIR states that Mr Ryan assumed both roles of Deputy Incident Controller and Planning Officer. This was the evidence of Mr Hynes but is not supported by either the Incident Action Plan and associated documents or the evidence of Mr Ryan and Mr Kennedy.

Taking this evidence into account, the Special Inquiry found that there was no deputy incident controller appointed for the Roleystone fire contrary to the deliberations of the IBMC, the recommendations of the Victorian Bushfire Royal Commission, the Review conducted by Mr Ferguson mentioned in Chapter 2 (p.4) and the updated WESTPLAN BUSHFIRE.

The Special Inquiry finds that this is yet another example of FESA management not complying with the State's emergency management plans as discussed in earlier sections. As the agency responsible for developing Emergency Planning for WA, FESA must comply with the State's plans to maintain their credibility and accountability.

¹⁵⁴ Ryan P & Kennedy G – Hearing 9 May 2011

¹⁵⁵ Hynes, C – Hearing 10 May 2011

Use of the AIIMS System

Understanding the use and application of the Australasian Inter-Service Incident Management System (AIIMS), the Special Inquiry discovered gaps in the outcome of its application for the Roleystone-Kelmscott fire.

Mr Hynes offered the following details about FESA's use of AIIMS:

*The Roleystone-Kelmscott fire was reported via a triple zero call to emergency services. So our structure is to have a response and incident management team, which is utilising the AIIMS system, which is the Australasian Inter-Service Incident Management System, which is adopted fully in Western Australia, including the WA Police. The incident controller responds to that, forms an incident management team. Then as you would be aware, we also had another significant fire going at Red Hill at the start of the Roleystone fire and we already had some 53 appliances directed to the Red Hill fire....*¹⁵⁶

As seen in the previous section, Mr Kennedy appeared to not use the AIIMS while directing the allocation of resources en route to the fire. The draft MIR makes the point that on the afternoon of the Roleystone-Kelmscott fires only five fire stations were covering Perth compared to the normal twenty-two stations¹⁵⁷.

In evidence provided to the Special Inquiry, Mr Fancote from the Bedfordale VBFB, describes the dilemma:

*...FESA's policy is they won't send everyone from the immediate area because they, and rightfully so, need to keep brigades or units in certain areas to make sure that if a fire or an incident happens close by they have still got resources available...units are getting sent from everywhere, when there is still a unit ten minutes down the road*¹⁵⁸.

Mr Fancote went on to suggest that improvements could be made by having a system of moving resources closer from stations further away from the incident as situations develop without bringing them all the way.

The Special Inquiry heard from a number of firefighters that the current system has gaps in communications. Brigades do not understand decisions about why certain units are called in to deal with the incident and others are left alone. Unless there is clarity, it exacerbates the already strained relationship with some of the volunteer brigades.

¹⁵⁶ Hynes, C – Hearing 29 March 2011

¹⁵⁷ Ellis (2011), op.cit., p.41

¹⁵⁸ Fancote, G – Hearing 6 May 2011

Claims were made to the Special Inquiry about favouritism afforded career fire fighters as opposed to volunteers in the call out system. Claims were also made about the delays involved in the tasking of units using the 'T Card' system.

The 'T Card' system applies to all emergency service personnel signing on at fire incidents and signing off so a record is kept of all those who are within the fire ground. This is not simply a resource issue, it is also important in terms of occupational health and safety. The Special Inquiry heard that some volunteer Brigades waited up to 40 minutes while trying to register their 'T Card' at the Incident Control Centre.

The claim was made to the Special Inquiry that, while the fire was burning out of control, volunteers were getting frustrated at not being deployed to deal with sections of the fire. The point was made that career firefighters are processed more expeditiously because their details are already known to the Incident Control Centre. FESA needs to look at other options for registering people attending the fire incident that comply with occupational health and safety requirements while at the same time, allowing firefighting resources to be more swiftly to allocated areas of responsibility and tasks.

Recommendation 27

The Fire and Emergency Services Authority review its use of the Australian Interagency Incident Management System to ensure that the most appropriate resources (including aerial resources) are used to respond to an incident. If resources are rejected during an incident either through the decision making process or other grounds, the reason for the decision should be documented.

Resources Not Used to Fight the Fires

The Special Inquiry received evidence from an Armadale Volunteer Fire and Rescue Service volunteer, Mr Steven Briggs¹⁵⁹. Mr Briggs is currently involved in a dispute with FESA which is outside the Terms of Reference of the Special Inquiry.

Mr Briggs told the Special Inquiry in evidence that he had attended the Roleystone-Kelmscott fire with a decommissioned fire vehicle which is a four wheel drive truck with 1200 litre water carrying capacity. According to Mr Briggs' evidence, he bought the vehicle second hand from the Falcon Volunteer Fire and Rescue.

¹⁵⁹ Briggs, S – Hearing 28 March 2011

The Special Inquiry saw photographs of the truck and according to evidence provided by Mr Briggs, the truck still had functional siren and warning lights as well as a VHF radio and some cutting equipment. To a lay person, the truck looks like an operational fire truck.

Mr Briggs said in evidence that he arrived at Incident Control at the Roleystone Fire Station about 2.20pm and was told by IMT staff that his services were not required. He then departed the area and attended another part of the fireground seeking to assist with evacuations.

Other very experienced firefighters expressed the view that any truck in those situations could have been used to assist firefighters simply by asking Mr Briggs to allow the vehicle to be commandeered for that purpose. Indeed, FESA has a policy on the use of private vehicles to fight fires¹⁶⁰.

The Special Inquiry simply makes the observation that breakdowns in relationships between FESA and volunteers need to be managed to ensure that they do not cause widespread dissatisfaction.

Recommendation 28

The Fire and Emergency Services Authority (FESA) review its program to decommission vehicles and ensure that when such vehicles are offered during an incident that FESA staff adhere to FESA's own policy of 'Guidelines for use of Private Equipment at Fires'.

There were two State duty directors for FESA on 5 and 6 February 2011 covering the Red Hill and Roleystone-Kelmscott fires, Mr Chris Arnol and Mr Lindsay Cuneo both of whom were called to give evidence as discussed elsewhere in this chapter.

Their role was to co-ordinate the State's resources to meet the various challenges arising from all of the fires burning over that weekend 5 and 6 February 2011. It is unclear, however, just how that was achieved when the evidence is examined.

Firstly, the evidence of Gary Kennedy was that he decided while driving to the fire what resources he should call upon¹⁶¹. Secondly, in evidence before the Special Inquiry, Mr Cuneo made the point that he was having trouble convincing the Incident

¹⁶⁰ FESA – *Guidelines for Operating Private Equipment at Fires*

¹⁶¹ Kennedy, G – Hearing 9 May 2011

Controller at the Red Hill fire to release resources for the Roleystone-Kelmscott fire. In evidence Mr Cuneo explained¹⁶²:

In that particular instance, for instance we had two fires burning simultaneously. I rang – I was given contact with both incident controllers at Roleystone and Red Hill, and I was ascertaining the severity of both fires. The incident controller at Red Hill did not want to release any resources. I made a judgment decision based on the information that was coming to me, for instance to move all the aviation aircraft from one emergency to the other. And I also then put in place mobilisation of resources from outside the metropolitan region to respond to assist the emergencies.

Q: *So in effect you over ruled the incident controller at Red Hill to release resources - - -*

A: *That's correct.*

Mr Cuneo further described his actions:

I spoke to the officer at Red Hill. He was concerned about the fire. He didn't want to release any resources, including the aviation resources, but I overruled him because I was getting information from the incident controller at Roleystone that property was being lost and I was not getting the same information from the incident controller at - - - (Red Hill).

This interaction between the State Duty Officer and the Incident Controller is insightful and demonstrates the need to ensure that Incident Controllers are properly trained and familiar with the overall co-ordination requirements in major multiple incidents.

The evidence of Mr Cuneo is in contrast to the actions of some of the fire fighters themselves. Mr Fancote, of the Bedfordale VBFB, was in attendance at the Red Hill fire but decided to leave it and attend the Roleystone fire. In evidence, he said¹⁶³:

Q: *One of the things I'm trying to establish is how much resource was put into the Red Hill fire and whether there was a swift enough response then to the Roleystone fire.*

A: *In my eyes, there wasn't. – the only reason why the Bedfordale light tanker and the Roleystone light tanker got released from the Red*

¹⁶² Cuneo, L – Hearing 20 May 2011

¹⁶³ Fancote, G – Hearing 6 May 2011

Hill fire was, when we received the pager call – myself and one of the lieutenants from Roleystone was in the unit next to me, we both know the area very well and knew that an incident there is going to turn ugly and local knowledge is going to prevail, so in that I made a decision to contact my chief, and from there he said, ‘Look, leave, and I will contact the incident management at the Red Hill fire’. So that was the decision that we made in-house, and then our chief took it up with FESA and organised it on that side. I believe no other units immediately left the Red Hill fire to attend the Roleystone fire.

The exchanges on this issue are cause for concern but even more concerning was the evidence of Mr Shane Harris of the Jandakot Volunteer Bush Fire Brigade¹⁶⁴.

Mr Harris is a very experienced bushfire fighter. He started his career in bushfire fighting with the Country Fire Authority in Victoria where he served for five years as a Captain. He has more than twenty years experience in fighting bushfires and is a construction supervisor in his usual occupation. The Special Inquiry found Mr Harris to be a very credible witness.

Mr Harris described the events of Sunday 6 February when during the morning he attended a christening in Atwell, which happened to be near the Jandakot Bush Fire Brigade. Mr Harris received a call around 12.15pm to attend the fire station and to standby and await further instructions. He arrived at the fire station around 12.30pm.

The rest of the Jandakot volunteer brigade assembled and ultimately, there were six crew and three vehicles on standby ready to deploy. Two of the vehicles are described as ‘light tankers’ and the third vehicle is a truck with a tank holding some 12,000 litres of water.

The South Coogee Brigade which is nearby was activated in a similar fashion. The South Coogee brigade had some 20 to 25 members.

Mr Harris stated in evidence that he waited a further 45 minutes before his brigade was called to attend the Roleystone-Kelmscott fire. Having given his crew instructions about what to expect at the fire and some personal safety instructions the brigades set off for Roleystone.

Mr Harris describes what happened next:

....at 1347 we had a SMS call or text on our phones to say divert. We also had a radio call. I was in the 12.2, the bulk water tanker at the time. I didn't receive the radio call. We had bad transmission so I didn't receive that. I

¹⁶⁴ Harris, S – Hearing 20 May 2011

received the pager and SMS call at 1347 to say, 'You've been stood down from Roleystone. You're to respond to the Ferndale fire.' Now, at that time of getting that call I had just turned right onto the Brookton Highway and was within probably two minutes of being on the scene...

Mr Harris went on to explain that the South Coogee brigade received the same instruction and was also redeployed to the fire at Ferndale. When asked about who made the decision given how close both volunteer brigades were to the Roleystone fire Mr Harris stated that COMCEN made the order. COMCEN is FESA's communication centre.

When asked about the conditions at Roleystone-Kelmscott from which he was redeployed, Mr Harris replied:

obviously, going on the radio, you could hear the mayhem that was going on there and the units that were already on the scene that things were going pear-shaped.... That it was way out of control and, obviously, in a fire of that sort of size and intensity – it was the early stages and nothing had really been set up to manage.

When asked whether he knew who made how the decision to divert the 12,000 litre tanker away from Roleystone to the Ferndale fire Mr Harris stated:

we only talk to the operator. I mean, obviously they get direction from I'm not, sort of, 100 per cent how FESA works. I'm starting to understand how FESA works. But I believe that they would have a manager that would make the call that then tells that person.

Mr Harris was then asked questions about his experience and how he would compare the Ferndale fire to the Roleystone-Kelmscott fire:

Ferndale was obviously at a small scale, a very small scale, and you could see that. Comparing the two fires, just as we were mobile to both the fires, obviously you could see the Roleystone fire as being a very large fire and heading to the Ferndale fire along Albany Highway you could see the fire intensity, sort of, growing, the smoke column was getting bigger and bigger, but again, it was that, sort of, tea tree, sort of, scrubby bushland wet, sort of, green that was making the smoke go up.

While the Special Inquiry can understand that, in the need to get resources appropriately deployed to avoid an even bigger catastrophe, decisions need to be made but Mr Harris' evidence¹⁶⁵ to the Special Inquiry indicated a lack of flexibility

¹⁶⁵ Harris, S – Hearing 20 May 2011

and common sense by FESA in its deployment of resources to the Roleystone-Kelmscott fires.

Mr Harris was told to comply with COMCEN's instructions despite making a call to his Chief Bushfire Control Officer, who was also the Planning Officer in the Roleystone IMT questioning the logic of his redeployment. Mr Harris said:

. . . I just got frustrated with sitting around doing nothing, we couldn't use – I used one load of water out of the tank to fill some light tankers at one point, just because I was doing nothing, and in the end I ended up just blacking out some edging with it. It was sitting there doing nothing. The vehicle was not required at all. I did ask for it to be released a couple of times because it had no value being there and it was never, yes, never released.

Q: *Who do you ask?*

HARRIS: *I would have asked the incident controller at that fire.*

Q: *Who was that?*

HARRIS: *I'm not sure of who the incident controller was on the day. It was – I know he was from – he was one of the Canning Vale SOs. (Station Officers)*

The Special Inquiry sought clarification about how the diversion of the critical resource was made but the decision appears to have been made 'on the run' with little regard to the critical nature of the decision. The incident will add to the lack of trust and confidence volunteer brigades have in FESA, which is contrary to the assertions made in FESA's submission to this inquiry.

Mr Harris summed up by saying:

I guess it's frustrating. Coming from, again, my background with CFA against FESA is frustrating. I've been involved in major bushfires in the past where we've had bulk water tankers sitting in streets purely just doing asset protection and have saved 100 per cent saved homes because they've had bulk water, and I guess coming here and seeing light tankers are pretty useless in a situation like that. They, you know, they only have, you know, 600 litres or 800 litres of water is just no use. It can't do anything. By the time the fire hits you you're out of water.

The Special Inquiry appreciated people like Mr Harris coming forward to give evidence rather than comment in the background. The importance of volunteers was repeated many times to the Special Inquiry. The Special Inquiry hopes that their evidence is heeded and that they are treated appropriately for having taken the responsibility to come forward.

The Special Inquiry set about establishing what was known about the diversion of resources away from the Roleystone-Kelmscott fires at a critical time as mentioned above. In evidence to the Special Inquiry Mr Cuneo, the State Duty Director for the duration of the fires had the following to say¹⁶⁶:

Q: *Did you have any view of what the Ferndale fire was; how severe it was or not severe?*

CUNEO: *No, no. I had – I was aware that there was a fire, but I was told it was a run of the mill fire....*

Q: *Were you aware that the Jandakot Bush Fire Brigade and the South Coogee Bush Fire Brigade were both deployed to the Roleystone fires?*

CUNEO: *I wouldn't be aware of any specific deployment of trucks. It's more an issue of numbers.*

Q: *How do you determine what type of equipment to send to a fire like a Roleystone fire?*

CUNEO: *To a certain extent the reality is it happens what's the available resources closest to – now, it's not totally that, but the reality is mobilising – you've got to get trucks there as soon as you possibly can. The closest trucks get there as quickly as they can to try and contain the fire to a smaller size.*

Mr Cuneo had no knowledge of the diversion and continued deployment of the Jandakot VBFB 12,000 litre tanker.

Q: *. . . If the incident controller at Ferndale wouldn't release the 12,000-litre tanker, and if the COMCEN wouldn't release the 12,000-litre tanker, how does it get brought to your notice to over rule those decisions?*

CUNEO: *A good question. I can only assume that the major – the Metropolitan Regional Operation Centre was across it. But*

¹⁶⁶ Cuneo, L – Hearing 20 May 2011

*decisions are made like that and sometimes you're not aware till after. There was a lot happening all of a sudden*¹⁶⁷.

The Special Inquiry can find no way of reconciling this decision with the pleas for action by residents at the fire ground for fire fighters to use their water to attack spot fires. The situation is made worse by the audio recordings of the FESA communications with the Jandakot VFBF when it arrived at the Ferndale fire after being redeployed from the Roleystone-Kelmscott fire.

At 2.09pm FESA COMCEN sent a message:

Jandakot twelve two confirm you are making contact at the Roleystone fire.

Jandakot replied:

No the Ferndale one.

COMCEN replied:

Roger.

This suggests that COMCEN had apparently not even realised that that it had redeployed the 12,000 litre tanker from Roleystone to Ferndale¹⁶⁸.

The draft MIR made no mention of this critical incident. This is likely to be because volunteer bush fire brigades were not interviewed as part of that review.

The Buckingham Bridge

In his description of the action to be taken to manage the incident Mr Hynes stated that the Buckingham Bridge was the first bit of key infrastructure identified to be saved but it was not saved and it burnt down splitting the fireground¹⁶⁹.

Unfortunately, this evidence cannot be corroborated because of the paucity of detail in the Incident Action Plan discussed in the previous sections.

The Special Inquiry visited the site of the Buckingham Bridge on its first independent visit to the Roleystone-Kelmscott area. The bridge is a key piece of infrastructure on the Brookton Highway that spanned the Canning River. The bridge was of timber

¹⁶⁷ Cuneo, L – Hearing 20 May 2011

¹⁶⁸ Special Inquiry members listened to the FESA recording of this communication

¹⁶⁹ Hynes, C – Hearing 29 March 2011

construction covered by a concrete overlay. The Brookton Highway connects the Albany Highway with the Great Southern Highway at Brookton.

During that visit, a resident who lives near the Brookton Highway and within sight of the Buckingham Bridge described the scene on the Sunday afternoon of the fires. The resident pointed out a water hydrant adjacent to the Buckingham Bridge that was accessed by fire trucks to fill their tanks.

Mr Hynes offered an explanation:

....what I will say to you is that they were well aware of the Buckingham Bridge, and in fact the first people on the scene were very much the local knowledge and they knew about how important that was, but their priorities couldn't put resources onto that bridge....

The resident went on to describe the impact that the loss of the bridge had on emergency services attending the Roleystone-Kelmscott area. It was estimated that those emergency service personnel who were familiar with the area had to take another twenty minutes to get from one part of the fire ground to the other. Those emergency service personnel brought in for other areas to assist and therefore, not familiar with the Brookton Highway and Buckingham Bridge obviously took a lot longer to find alternative routes. Some 'got lost' simply because GPS systems were unable to operate in the thick smoke and in that part of the topography.

Other fire fighters have given accounts about the poor radio communications on the day of the fires and so getting directions became problematic.

When asked about how such decisions are made, Mr Cuneo offered the following explanation:

...I suppose it comes back to this incident management team. The incident manager – incident controller in each team trying to determine what actually is burning, and sometimes, as I said to you, that's not always clear; trying to work out where the fire is; what those threats are there, whether it's property, hospitals, old people's homes, Buckingham Bridge in this case.... And if it has been identified that the bridge is there, and you would expect that the sector – one of the tasks for the people working on that sector would be to protect Buckingham Bridge.

Mr Paul Ryan was the first Incident Controller to take control of the fire. He stated that he was notified at 3.20pm that the bridge had collapsed¹⁷⁰ Mr Ryan stated in evidence that the bridge was: *covered in creosote so it made it highly flammable.*

¹⁷⁰ Ryan, P – Hearing 9 May 2011

The Special Inquiry received evidence and submissions from Main Roads¹⁷¹ seeking clarification of the responsibility for fuel loads around major roads and bridges. In the material supplied by Main Roads the Special Inquiry was informed that the Buckingham Bridge not treated with sump oil or creosote as was first thought.

The loss of the bridge could have caused the loss of life. This possibility does not seem to have been considered within the IMT or by others attending the fire. It was claimed that the bridge was engaged by fire very quickly but the problem remains that there is no evidence to corroborate that this infrastructure was appropriately identified during the fire. The draft MIR appears to have mirrored Mr Hynes' evidence on this issue.

The Special Inquiry believes that an equally important question to be answered is **why was the Buckingham Bridge not identified as a key piece of infrastructure to be protected as part of resilience building, planning and exercising during the non bushfire season?**

Recommendation 29

The Fire and Emergency Services Authority and the Department of Environment and Conservation ensure that their Incident Controllers identify critical infrastructure as part of their initial assessment and preparation of Incident Action Plans when attending major incidents and that training and exercises be used as an opportunity to identify and document critical infrastructure.

In evidence given to the Special Inquiry, it was established that there are 2,700 structures in WA that require regular inspection by Main Roads¹⁷². At the moment there is an annual bridge inspection program that involves a cycle of 12 months to 2 years duration to inspect each structure. It is an onerous and expensive task but from a bushfire perspective it is one that requires attention. About half of the structures have timber bases and most of the bridges are located in areas of the South West of WA and are considered as 'high risk'.

The Special Inquiry considers that this could be an excellent example of 'sharing the responsibility' where planning by Incident Controllers be combined with regular inspections by Main Roads to ensure appropriate attention is given to this type of infrastructure in the future. Indeed, the WA Governments Shared Land Information

¹⁷¹ Cammack, M – Hearing 12 April 2011

¹⁷² Cammack, M – Hearing 12 April 2011

Platform is a perfect tool to address the work that needs to be done in this area with a partnership approach.

Recommendation 30

Main Roads Western Australia undertake more frequent examinations of its bridges located in areas prone to bushfire and ensure that the risk posed to loss of infrastructure in a fire be understood by local authorities.

4.2 EVACUATIONS

Evidence was given to the Special Inquiry concerning an impasse that had developed between FESA and WAPOL about the powers to be used when evacuating residents. This arises from confusion about the powers afforded to FESA and other agencies arising from a declaration under section 13 of the *Bush Fires Act 1954* or an emergency situation declarations made under section 50 of the *Emergency Management Act 2005*.

The fact that the respective agencies did not agree on a common position regarding powers to be exercised in an emergency such as the Roleystone-Kelmscott fires before the commencement of the 2010/11 bushfire season reflects poorly on both organisations.

Contrary to evidence provided by Mr Hynes, at both the hearings on 29 March and again on 10 May 2011, the matter remained unresolved and legal advice was still being sought following the commencement of this Special Inquiry. The Special Inquiry finds that **the community and government expect that these types of issues are approached in a collaborative but definitive manner to serve the interest of the community and not that of the individual organisations.**

The perceived problem lies at the heart of evacuations. Section 13 of the *Bush Fires Act 1954* provides power to evacuate once an 'authorised person' is appointed who is empowered to create cordons and close roads as well as evacuating people. Police officers are not directly afforded the same powers but carry out the functions in support of the 'authorised person'.

The question arises that if people refuse or in some other way not give effect to the order of the 'authorised person' under what legislation ought the situation be resolved?

The Special Inquiry became aware that a legal opinion had been sought from the State Solicitor's Office on the issue. The advice is subject to legal professional privilege and is not required to be any further elaborated upon in this report except to point out some obvious issues.

In evidence before the Special Inquiry, Mr Hynes stated¹⁷³:

...the Emergency Management Regulations hadn't declared the hazard of fire for some time – it was an outstanding matter – and it prevented us from using the powers of the Emergency Management Act should an emergency situation be declared. So in an attempt to – it wasn't an attempt, it was actually a way to remedy that, we got the State Solicitor's advice and it was suggested that we could incorporate the provisions of the Emergency Management Act – emergency situation powers into the Bush Fires Act. In doing that, it required a declaration under section 13. But, also, the section 13 amendment also was the one where we enacted the Cabinet decision to provide FESA with the power to take control of fires...

Mr Hynes elaborated on his answer:

it was intended to resolve the issues of this – I suppose agencies working in tenures and working by cooperation and goodwill which, in essence, works plenty of times. However, the Auditor General's review, coronial inquests, and even the Royal Commission, has found that experience is that cooperation and goodwill works to a point, but when things are at their most serious, you need to have unity of control, and that is where that section 13 was put through...into the Bush Fires Act. It allows us to take control of a fire, but also enables the incident controller to use powers to direct and prohibit movement and use the powers in an emergency situation.

Mr Hynes went on to quote a conversation that he said had taken place between himself and Deputy Commissioner Chris Dawson of WAPOL that resolved the matter when it was raised at the SECG meeting on the night of 6 February. However Mr Dawson was called to give evidence and was able to produce records that showed the matter was not resolved on the night of the Roleystone-Kelmscott fire and the Special Inquiry accepts that evidence¹⁷⁴.

Members of the WA Police were called before the Special Inquiry and to sum up their evidence they were neither clear on the level of Incident that had been declared for the Roleystone-Kelmscott fires, nor the powers they were applying for the evacuations¹⁷⁵.

¹⁷³ Hynes, C – Hearing 10 May 2011

¹⁷⁴ Dawson C – Hearing 18 May 2011

¹⁷⁵ Bouwman J; Sorrell B; Gaunt D – Hearing 11 April 2011; Zanetti P – Hearing 19 April 2011

The evidence provided by the Incident Controllers on the subject of legislative powers was also not convincing in terms of their confidence and knowledge about the powers they were exercising on the night of the fires and how they were being applied. The following passages from their transcripts on this subject reveal considerable confusion¹⁷⁶:

RYAN: ..I was utilising the Fire Brigades Act because it's a gazetted fire district and then later in – was it later in the afternoon that they had sections 13 of the Bush Fires Act declared?..

KENNEDY: Yes...

RYAN: ...Which gives power to the incident controller and also for them to actually enact, to strengthen or remove the ambiguity regarding the Fire Brigades Act about evacuations, it strengthens it with the – section 13...

KENNEDY: No, the State Emergency Act. Is it Bush Fires Act?..

RYAN: Bush Fires Act.... Yes, he is declared incident controller.

Q: And so what power, and to whom, is there to evacuate people under section 13?

KENNEDY: Section 13 gives you the power to evacuate, to control all personnel working in the area, to give you authority to basically claim vehicles, do whatever you want, move people around, control life lines and all the rest of it, so –and it also – and it's just an enhancement, really, of the Bush Fires Act and the Fire Brigades Act, that gives us complete....

RYAN: It pulls both Acts into it as well.

KENNEDY: Yes.

Legislation aside, the actual evacuation is further discussed in Chapter 5 in terms of the impact upon the community but it is clear that several issues exacerbated the evacuation process. Many of these issues were raised with the Special Inquiry either during the Hearings process, at public meetings and in submissions provided to the Special Inquiry. In summary they include:

- Selection of road blocks being inappropriate and inconsistently applied
- Ineffectiveness of designated 'no go' zones where barriers or restrictions were easily breached

¹⁷⁶ Kennedy, G; Ryan, P – Hearing 9 May 2011

- People outside the barrier being in full view of and only metres away from people inside the cordon accessing materials and refreshments
- Lack of situational awareness and negative attitude displayed by people manning the barriers including Police
- Houses with electronic gates preventing authorities from entering and so evacuations at these properties being abandoned by authorities
- Media access provided to show destruction of homes before owners were permitted to return home to see the damage for themselves
- People who chose to remain were ignored by authorities.

Not all experiences were negative. Some residents gave evidence about the effectiveness of the process and were effusive in their praise of the authorities. Mr Hynes, who has been mentioned many times in this report, was singled out in evidence provided by the State Welfare Emergency Co-ordinator of the Department for Child Protection¹⁷⁷. The two Incident Controllers, Mr Paul Ryan and Mr Gary Kennedy were singled out for praise by the Police who attended the fires¹⁷⁸.

In fairness to all the authorities involved, many positive comments were made to the Special Inquiry. The focus of the Special Inquiry has been to make recommendations that will hopefully advance on gains already made in sharing the responsibility for building community resilience and critical comments ought to be seen from that perspective.

It is important, however, that when people are exercising powers over other people in the community that their powers are universally understood by the people exercising the power and those who are affected by their decisions.

In understanding the need to resolve the legal issues surrounding evacuations and road blocks, the Special Inquiry believes that the following extract from the evidence of Mr Mills is worth considering:

the main thing that I really wanted to stress is that forced evacuation is something that I would be opposed to and I would think it wouldn't be in anybody's best interests to waste resources enforcing people to move when they don't want to, unless they're mentally impaired or obviously incapable of performing the way that they would hope¹⁷⁹

¹⁷⁷ Harrison, D – Hearing 3 May 2011

¹⁷⁸ Sorrell, B – Hearing 14 April 2011

¹⁷⁹ Submission of Mr Tim Mills, and at a Hearing on 20 May 2011

Recommendation 31

The Fire and Emergency Services Authority and the Western Australian Police ensure they receive all necessary legal clarification in relation to *Bushfire Responsibilities of Police Officers – Powers Used in Assisting Fire Authorities in Responding to Bushfires*, to be promulgated across FESA and WAPOL.

The Special Inquiry was told of the difficulties experienced by residents who wanted to return to their properties, either after evacuation, or in an effort to defend and protect their homes.

Some people were concerned that the denial of access exacerbated the trauma caused by the initial evacuation when it appeared unnecessary. For some residents concerned about the damage caused to their homes in their absence through evacuation the situation was made more difficult by the prospect of media coverage about the damage to their home. The Special Inquiry was told that for some residents the media coverage was the first they became aware of the extent of damage.

These matters were considered in detail by the Victorian Bushfires Royal Commission and the Victorian Government subsequently developed a Traffic Management System¹⁸⁰ to manage entry to fire grounds, including the issue of a 'return permit'.

Recommendation 32

The Western Australian Police and the Fire and Emergency Services Authority jointly examine the Traffic Management System developed as a result of the Victorian Bushfires Royal Commission and seek its adaptation to use in WA with additional attention to the access and egress by bona fide residents to areas that are evacuated

¹⁸⁰ Victoria Police, Country Fire Authority and Department of Sustainability and Environment (2009) *Guidelines for the Operation of Traffic Management Points During Wildfires*

4.3 COMMUNICATION

The ABC

The Special Inquiry was asked to consider the adequacy and effectiveness of information and communication campaigns and mechanisms, including systems for alerting residents in relation to the fire or potential fires (TOR 4).

The Special Inquiry received several public submissions raising issues about communication during the fires. Some of the public submissions were from commercial operators who have developed the technology to cheaply and simply broadcast warnings over specified areas of the community through use of existing infrastructure such as public broadcast by radio.

As the Special Inquiry did not have the technical expertise or time to assess the relative potential of these products, it referred these proposals to FESA for assessment. **Some of the material presented is very impressive and the Special Inquiry suggests that FESA expeditiously test the merits or otherwise of the equipment to have a better system in place for the 2011/12 Bushfire Season.**

Several commercial operators had previously engaged with FESA about their products and complained about the delay in receiving feedback. The Special Inquiry did not have the time to review the assessment process in FESA and cannot comment one way or the other.

The State Emergency Management Committee has a sub committee, the Public Information Group (PING). The ABC in Western Australia is represented on that sub committee by Ms. Deborah Leavitt, who manages local ABC radio. The Special Inquiry took the time to examine the options made available by the ABC through hearings, a site visit and an interview with Mr Ian Mannix who is the ABC's national co-ordinator for emergency broadcasting.

Before describing the outcomes of the interaction with the ABC, it was noted that no commercial radio or television operator in WA took the opportunity to make a public submission to the Special Inquiry.

At the community meetings conducted by the Special Inquiry there were a variety of views about receiving messages over the radio about the fire. Some residents praised the ABC for its broadcasts; others raised the question why the ABC appears to be the preferred option for broadcasts about the emergency while others raised access to broadcasts as an issue.

At the hearing with the ABC¹⁸¹, in its public submission and in the video conference with Ian Mannix¹⁸², the ABC was at pains to make the point that they are not looking to be the exclusive platform to broadcast public messages about an emergency. They are quite willing to share the space with other operators if that was to be the decision of government.

Having said that, it is clear to the Special Inquiry that the ABC has considerable experience right across Australia in broadcasting for emergency situations. The ABC was present in Queensland in December/January when the State was affected by a series of emergencies involving cyclones and floods. Mr Mannix also attended Perth from his base in Adelaide, SA for the duration of the Perth Hills fires in February, 2011.

The community meetings held by the Special Inquiry discussed the value of the messages broadcast about the Roleystone-Kelmscott fires. Some residents complained that the messages were 'meaningless' because the message had very little variation over given periods of time. Chapter 3 discusses the speed at which the fires occurred and the question arose as to why this did not appear to be reflected in the warning messages.

The ABC explained that they were simply broadcasting the messages received from FESA and to vary the message for 'stimulation' value is fraught because they need to faithfully broadcast the FESA message. They further pointed to studies undertaken by James Cook University and the University of Tasmania that indicate two or three messages are required before people change their behaviors¹⁸³.

The Special Inquiry considered a range of evidence about different means of improving the emergency warning messages that FESA provides to the ABC for broadcast on radio. In its deliberations on this matter, the Special Inquiry considers that the following measures would improve the content and presentation of emergency warning messages to better relay critical information to listeners:

- The messages should be more concise to focus on critical messages
- A number of submissions raised concern about the length of these messages and the potential for 'listener fatigue'
- This is exacerbated during multiple incidents when several messages, duplicating much of the same information, are broadcast one after another
- Messages should advise of specific times at which a given area is expected to be impacted (eg 'between 2am and 3am). Current practice is to advise of areas that will be impacted by a fire 'within one hour'

¹⁸¹Rasmussen T; Leavitt, D & Duhs, J – Hearing 18 April 2011

¹⁸²Mannix I – Videoconference 1 June 2011

¹⁸³Ibid.

- if a fire moves more slowly than predicted and the same areas remain under threat an hour (or more) later than forecast, reference should be made to this in the message so that listeners are aware that the message is current, rather than an old message that is being repeated (this issue will be mitigated to some extent by the point above)
- Emergency warnings provided by FESA to the ABC for the same incident should be numbered to clearly identify one message from the next, limiting the potential for confusion (in the same way the BOM numbers the warnings it issues for cyclones and floods).

Recommendation 33

The Fire and Emergency Services Authority and the ABC commence a thorough review of emergency warning messages. This review should give consideration to:

- The content, structure and presentation of emergency warning messages
- Media access to the Incident Management Team and State Operations Centre.

This review should be expanded to include other media organisations should they demonstrate a willingness and capacity to contribute.

The FESA message on fires has inherent delays due to the fact that the message is 'filtered' through FESA's head office before reaching the broadcaster's desk. As the community pointed out to the Special Inquiry this delay in broadcasting meant that the news was stale by the time the message was heard on the radio.

The Special Inquiry believes that on radio broadcasting, in the absence of any other submission or advice, the community should be encouraged to have **one source: one message** and that FESA should devote time to building a more accessible and trusted relationship with the ABC.

At the national level for some years now the private sector and registered parties have had access to what is called the 'Trusted Information Sharing Network'. It is modeled on a UK system that is used successfully for national security matters. Put simply, it means that 'trusted' parties have lawful access to information on national security that would otherwise not be more broadly shared.

In considering options, the Special Inquiry observed, although not in detail, the apparently very successful arrangements in Queensland during that State's numerous emergencies in the recent past. The authorities and the ABC made extensive use of social networking to alert the community and were able to provide a 'stamp of authenticity' on the messages from local government, police and the ABC.

The community meetings held by the Special Inquiry appeared to have less appetite for social networking. The age demographic and interruptions to power supply were raised to balance any enthusiastic move towards wholesale adoption of social media options. However the Special Inquiry notes that social networking systems can be accessed on mobile phones and over time, could prove to be the preferred medium.

In evidence before the Special Inquiry the CEO of FESA indicated that plans were in place for FESA to move down this path as part of a redevelopment of FESA's website¹⁸⁴.

The preferred position for the ABC, and no doubt other media outlets, would be to be able to relay messages directly from the Incident Controller. This has been addressed in other reviews including the Royal Commission and it is one of the reasons why it has been recommended that a Deputy Incident Controller be appointed for Level 3 Incidents¹⁸⁵. As mentioned earlier in this Chapter the Roleystone fires did not have a Deputy Incident Controller specifically appointed which was a critical oversight.

The merit of one source: one message was addressed by the Victorian Bushfires Royal Commission who recommended that the Victorian Government ensure that a single, multi-agency portal for bushfire information be established that information simultaneously to both the Country Fire Authority (CFA) and the Department of Sustainability and Environment (DSE) websites¹⁸⁶.

The Victorian Government accepted this recommendation and in response developed the One Source One Message tool to enable all Incident Controllers to send bushfire warnings simultaneously to a range of outlets, including the CFA and DSE websites, Victorian Bushfire Information Line operators and media broadcasters. The adoption of a similar system in WA may assist the needs of the community to receive the message and the media gaining access to the Incident Controller.

As pointed out in the MIR, conflicts can occur in messages to the community if live broadcasts, websites, media alerts and other warning systems are not in sync¹⁸⁷. In the Roleystone-Kelmscott fires this was the case so some work needs to be carried out to overcome what is a very resource intensive issue if not handled appropriately.

¹⁸⁴ Harrison-Ward, J – Hearing 29 March 2011

¹⁸⁵ VBRC (2009); Ferguson, E (2010)

¹⁸⁶ VBRC, op.cit.

¹⁸⁷ Ellis, op.cit. 35

Recommendation 34

The Fire and Emergency Services Authority develop in partnership with other emergency service agencies a 'one source: one message' multi layered system similar to that recommended by the Victoria Bushfire Royal Commission.

State Alert Warning system

According to early data received from the Bushfire Cooperative Research Council Survey mentioned in Chapter 2, 55 per cent of respondents were made aware of the bushfires through FESA's use the 'State Alert' to inform people of the bushfires. The next largest cohort is 34 per cent of respondents who became aware of the fires through the ABC.

Despite this, the Special Inquiry heard varying evidence successful implementation of State Alert in both the Hearings and public submissions. Typical criticisms of the State Alert system were:

- *"The SMS info was received well after we had evacuated and was therefore ineffective"*¹⁸⁸.
- *"We received a mobile phone SMS at 3.55pm warning that we may be impacted by fire. The main fire front passed through our property at 1.30pm. This system of warning residents was clearly ineffective in our case"*¹⁸⁹.
- *"...we would like to see the mobile phone texting system of warning to be upgraded. We got our warning text message at 4pm, which by that stage we were watching our neighbor's home burning from a distance. We think the system has great potential but the bureaucratic delays in sending the SMS need to be eliminated. We would like to see the mobile phone texting system be one which gives out an early warning if firestorm conditions are imminent, giving residents time to organise safety systems around their homes to be switched on, or to alert people who can do this for us. We have a proper Fire Plan in place written up by our front door, and the extra warning time would allow this to be fully implemented"*¹⁹⁰.

These points made by residents are only a sample of the discussion on this system. In the main, the biggest complaint was the timing of the messages followed by the confusing content which the Special Inquiry deduced was caused by messages

¹⁸⁸ Submission of Anne Johnston

¹⁸⁹ Submission of Ed and Leonie Donnes

¹⁹⁰ Submission of Patricia Bensley

being received out of sequence. Some of the time stamps on the messages reflected Eastern Standard Daylight Saving time according to residents.

The draft MIR made the point that the system worked well during the fires in a technical sense¹⁹¹. It would be wrong to think that the system worked well in what it was supposed to achieve and the Special Inquiry recommends more work needs to be done if the system is intended to deliver timely and accurate advice.

Some residents made the point that they did not need an SMS message to tell them what was happening because they could see it and smell it:

... I think everybody expects government to do everything, you know what I mean? And I think surely if I live in the Kelmscott Hills or the Roleystone Hills and I see smoke, I have a responsibility as an individual. I shouldn't have to wait until somebody sends me an SMS message, you know what I mean? So I think, where's the common sense in this¹⁹².

The Shire of Mundaring provided an observation in their written submission to the Special Inquiry that sums up the management of expectations in these circumstances and the need to maintain a level of education on the topic in the community. They stated they provide the following advice:

*If a fire starts close to a property, first the fire needs to be spotted and phoned in, a bushfire brigade called out, a response time may be between 10-25 minutes before fire fighters are on site. A FESA officer must attend and assess the situation, determine possible spread of fire [and then] request State Alert to be activated. **Generally, the quickest response would be a minimum of 45 minutes**¹⁹³.*

Another suggestion emerging from the community discussions was to revert to the idea of a Community Siren sounding to warn residents of impending danger. After further discussions with a broader group of residents and experts, it was pointed out that the siren would be useful to alert that something is happening but that demand for additional information as to what exactly was happening and who was affected would mean utilizing existing systems anyway. The idea is not dismissed out of hand but it would need other systems to support the information that would be demanded by residents.

¹⁹¹ Ellis, op.cit.

¹⁹² Mensink, J – Hearing 18 May 2011

¹⁹³ Submission of the Shire of Mundaring

Webinfo and talkback radio

During the conduct of the Special Inquiry various agencies were called to give evidence and, in doing so, it was established that there is a significant amount of material placed on the websites of individual agencies. Some of this information is excellent in terms of the advice it provides. For example, on FESA's website there is a detailed discussion on the merits of various alternatives to protect evaporative coolers that is discussed in Chapter 5.

The problem raised by some residents is the requirement for them to go from one website to another to chase down their understanding of the current situation and advice. This arrangement lends itself to conflicting messages being communicated to the public at a critical time. It is also dependent on power supply to access the information.

Some residents appreciated receiving contemporary information from talk back radio, however concerns were also raised about people providing incorrect information. Filtering of such calls to ensure accuracy therefore becomes important.

In the discussions with Queensland authorities, it was noted that social media was used very effectively to dispel incorrect information. It is understood the radio stations in Perth sought confirmation of events from other callers if a particular statement was made about buildings being involved in fire.

This situation adds weight to the ABC's suggestion about access to the 'highest authority' on the ground so that accurate and timely advice can be given.

The ABC proposed a model which the Special Inquiry believes has merit. The model would be based on 'one source: one message' with no preferential treatment to the ABC but it would involve a multistranded platform with Twitter, Facebook, ABC Local Radio and/or Commercial Radio. Appropriate formal undertakings on the role of the media outlet(s) involved would need to be in place to enable a level of trust in the partnership. The outlets not directly involved could then point to the one source for information on their own websites or talkback and all the agencies involved in the emergency could point to the same single source for the most up to date information.

In all of the discussion on this topic care was taken to separate the 'message' to be sent by the authorities and the 'media coverage' of the event. Just as these two issues are considered separate – **plans should be put in place to train Incident Controllers in media as has occurred elsewhere in the country. The ABC has offered to assist in that regard and that offer should be considered and acted upon before the commencement of the 2011/12 fire season.**

Radio Communications Used by Firefighters

The Special Inquiry received evidence and submissions from firefighters about poor radio transmissions during the fire. The problem extends to some suburban firefighters being unable to have radio contact with bushfire brigades.

Mr Tim Mills, a Station Officer at Success Fire Station, explained:

I've always got problems with the radios. The VHF radio portables are pretty ineffective. The batteries run flat very quickly. There's not a very good range. There's no warning that the batteries are going to go flat, it's just the way they are. The UHF are a little better. For some reason our vehicle had had the battery charger taken out of it, so, while we do have about four or five spare batteries in there, they run flat fairly quickly¹⁹⁴.

Mr Gossage of the Serpentine Jarrahdale Shire stated:

my captains have informed me that there was very poor radio communication in that area, which is, in a sense, understandable, given the terrain it was in, but they were more frustrated that they were told to go on one channel and talk to their sector commander and never got to speak to their sector commander because he was on a different channel. So there was that confusion out at the fire ground¹⁹⁵.

In a letter provided to FESA and copied to the Special Inquiry, Mr Robert Crawford, Unit Manager with the State Emergency Service complained that *...there wasn't a comprehensive communications plan for this incident¹⁹⁶.*

Mr Fancote from the Bedforddale VBFB gave similar evidence:

...they (events) weren't as well put together as what we would have thought..it was a major fire and things get thrown out the book...actual procedures that they took weren't in my eyes, the best way to deal with those sorts of situations....communications was(sic) terrible, right through to operational decisions weren't being made correctly or timely...¹⁹⁷

This is supported by information provided to the Special Inquiry by two Balingup Bushfire Brigade members who stated that there was:

- *Initial confusion as to the radio channel to be used*

¹⁹⁴ Mills, T – Hearing 20 May 2011

¹⁹⁵ Gossage, D – Hearing 17 May 2011

¹⁹⁶ Letter to FESA from Communications Support Group SES dated 25 May 2011

¹⁹⁷ Fancote, G – Hearing 6 May 2011

- *Two changes of sector commander during out shift (i.e. three sector commanders in total)*
- *Sometimes difficulty contacting the section commander because he was away from the vehicle radio¹⁹⁸.*

Recommendation 35

The Fire and Emergency Services Authority and local governments jointly review radio communications capability prior to the 2011/12 bushfire Season with a view to improving the current delivery of service to firefighters

4.4 CO-ORDINATION

Local Resources

The Special Inquiry established that in accordance with SEMP 4.1 (see Chapter 2) the Operational Area Support Group (OASG) met for the first time at 4.00pm on Sunday 6 February 2011. This meeting was followed by a State Emergency Coordination Group (SECG) meeting held at 6.30pm. Given the number of events, their complexity and their impact on the community, the Special Inquiry looked at the impact and timing of these meetings and how they impacted upon overall coordination.

As discussed at the beginning of this chapter, another area of focus that emerged during the Special Inquiry was how the decisions were made about resourcing of the Roleystone-Kelmscott fire having regard to the other fires that required resourcing at the same time. This is directly relevant to term of reference number five about the coordination of activities across all levels of government, including volunteer groups.

We saw in Section 4.1 that the Incident Controller, Mr Kennedy made his own direction for resources but there was also the role of the State Duty Director who for the first stages of the fire was Mr Lindsay Cuneo.

As discussed in the same section of this report it was apparent that Mr Cuneo had his own challenges in acquiring resources for Roleystone/Kelmscott by 'convincing' the Incident Controller at Red Hill to release his resources for redeployment to where they were most needed in the eyes of Mr Cuneo who had the role to co-ordinate¹⁹⁹.

Then we saw the evidence from Mr Shane Harris who is a Lieutenant in the Jandakot Volunteer Bushfire Brigade who indicated that decisions are made by

¹⁹⁸ Bailey, C & Cooper, D – Memo included in the Submission of the Locals Against Wildfire Inc.

¹⁹⁹ Cuneo, L – Hearing 20 May 2011

FESA COMCEN without apparent reference to anyone in a position of co-ordination²⁰⁰.

The Special Inquiry was also told that that resources were drawn from Kojonup and places four hours away ignoring resources closer to the fire.

There may have been good reason for acquiring these resources ahead of other options but when it is not made clear or understood by the volunteer fire brigades there will always be the potential for such decisions to be viewed as 'unfair'. The Special Inquiry urges FESA to be more transparent in these types of decisions because it is clearly not obvious to those involved how these decisions are made or why.

DEC Resources Vs Interstate Resources

As mentioned previously, Mr Craig Hynes from FESA was required to give evidence on two occasions to the Special Inquiry²⁰¹.

On the first occasion, Mr Hynes advised the Special Inquiry that he had not called upon the DEC preformed teams to assist in the Roleystone-Kelmscott fires:

. . . They weren't called upon in this fire...

Mr Hynes went on to explain that;

...To bring in pre-formed teams has already proved unsuccessful in other fires and in fact if you look at the Boorabbin Inquest, for instance, there was quite a significant comment made by the Coroner about bringing a group of people into a region who are not familiar with the region...

By the time of this evidence being given to the Special Inquiry, it had been established that Mr Hynes had approached his counterpart in Victoria to assist in the Perth bushfires. The Special Inquiry was trying to reconcile why FESA management would ignore the DEC pre-formed teams in favour of interstate resources unfamiliar with the terrain.

Mr Hynes explained that he particularly wanted the skill out of the Victorian Fire Brigade to fight the fire on the urban interface.

The Special Inquiry noted this reasoning but also accepts that the Roleystone-Kelmscott fire was encroaching on DEC managed lands and in fact DEC heavy

²⁰⁰ Harris, S – Hearing 20 May 2011

²⁰¹ Hynes C – Hearings 29 March 2011 and 20 May 2011

machinery and DEC prescribed burns in the Banyowla Regional Park are what contained the fire on one flank and ultimately helped it to be placed under control.

Mr Hynes had made the approach to his Victorian counterpart **before** the State Emergency Co-ordination Group meeting on the Sunday evening at 6.30pm. This was stated in evidence by Mr Hynes at both hearings in which he was involved.

The FESA submission made to the Special Inquiry states that:

The criticism of FESA requesting interstate support from Victoria is a clear example of this lack of integrated approach. However, the formal approach to Victoria was sent under the joint signature of FESA and the DEC Director General, so any suggestion this request occurred without the knowledge of DEC is simply not correct (email to Waller 6/2/2011)²⁰².

At the second hearing on 10 May 2011, the Special Inquiry attempted to clarify the situation again:

Q: *...am I right or wrong. When you contacted the Victorian counterpart ..Craig Lapsley, I understand....That was before the SECG meeting?*

Hynes: *Yes, and, from my recollection, I think it was around quarter past 5, around that time.*

Q: *And I think it is actually referred to – it is, indeed, referred to in your statement.*

Hynes: *Yes.*

Q: *1715 hours.*

Hynes: *Yes.*

Q: *So there was no discussion with DEC before you made that contact with the Victorian Fire Commissioner?*

Hynes: *... certainly not from me.*

Q: *....did you participate in the collating and submitting of the FESA submission to this inquiry?*

Hynes: *Yes, I did. Yes.*

²⁰² Submission of the Fire and Emergency Services Authority, p.283

Q: *In that submission, it talks about – on page 283 – that any suggestion that the request to Victoria was made without DEC's knowledge is incorrect.*

Hynes: Yes.

The Hearing revealed discrepancies between the FESA submission and evidence provided by Mr Hynes.

A letter subsequently had to be sent to Victoria and signed by the Director General of DEC to formalise the arrangement because the inter-state arrangement exists between DEC and its Victorian counterpart. Therefore, FESA had to inform DEC of what Mr Hynes had done in order to get the letter signed. Better consultation could have avoided this situation.

The Special Inquiry finds that FESA's Submission and evidence obscured the facts and that the actions in acquiring the Victorian resources were done without proper prior consultation with DEC. This is another example of the lack of cooperation between the agencies and initiated by FESA.

Mr Hynes' statement to the Special Inquiry mentioned earlier that he was concerned about the WA Coroner's comments in the Boorabbin Inquest about bringing persons unfamiliar with the fireground fails to be convincing when he had sought to obtain resources from Victoria. Presumably, the Victorian resources as skilled as they may be would not have had the same level of familiarity with the fireground as WA DEC officers.

A further question which strikes at the heart of co-ordination for the Roleystone-Kelmscott fires is why would the management of FESA not allow proper and due consideration be given to locally available expertise and resources to fight the fire.

The Special Inquiry finds that optimum coordination of available resources to fight the Perth Hills fires of 5 and 6 February 2011 was not provided because of a series of shortcomings on the part of senior FESA management to properly consult and coordinate.

The Special Inquiry further finds that the FESA submission and the evidence it provided to the Special Inquiry attempted to cover up these shortcomings.

Chapter 6 discusses the failure of the FESA Board to ensure that it had reviewed the Submission its agency was presenting to this Special Inquiry. Coupled with the matters raised in this section, there are serious questions about governance within FESA that need to be addressed.

In order to overcome these difficulties in the future it is suggested that OASG meetings be conducted much earlier than they were on this occasion and until every agency is satisfied that coordination is at optimum levels, the Chair of the SECG should consider earlier interventions as described in his evidence²⁰³ and call agencies together to ensure optimum coordination of resources is occurring and critical decisions are understood and supported by the SECG.

Another example of poor coordination exhibited by FESA is the process surrounding the Major Incident Review of the Roleystone-Kelmscott fires. The Special Inquiry supports many aspects of the MIR but there are clearly parts of the MIR that have caused concern both to this Special Inquiry and other agencies. The MIR was informed in the main by FESA.

The Special Inquiry is concerned about FESA's input into and management of the MIR process. The MIR should be an independent assessment of the operational management and response of an incident. **It is the view of the Special Inquiry that FESA's involvement in this process brings into question the independence of the MIR and serves to undermine its findings.** The MIR process is discussed further in Chapter 6.

The people and government of WA deserve better co-ordination. FESA must understand that the investment by Government in providing it with the highest levels of powers and resourcing for emergencies in WA brings with it considerable accountability to 'Share its Responsibilities' with all stakeholders in a transparent, accountable and collaborative manner.

²⁰³ O'Callaghan, K – Hearing 14 March 2011

CHAPTER 5: THE IMPACT

5.1 MEASURES OF SUCCESS

As outlined in the opening of this Report, the Special Inquiry has tried to balance the challenges of addressing the impacts of a bushfire in which no lives were lost, but enormous damage was done. While it is a great credit to all those involved that no lives were lost in the fire of 6 February 2011, the carnage wrought by this fire and the trauma that it inflicted on those caught in its path should not be underestimated.

Perhaps somewhat ironically, the emotional impact of losing a home to a bushfire was best made to the Special Inquiry by Mr. Jos Mensink, a resident of Kelmscott who successfully defended his own home, as was discussed in Chapter 4:

My motivation basically was that if I lose my own house at 60 years of age, having all my memories in there, yes, I'm well insured, and yes I've got the money. I can replace it all. But some of the stuff was irreplaceable. And the trauma for my wife and my kids and all the other stuff, and my mother-in-law. It would kill her, you know what I mean? So that motivated me to save my own house and I thought when I was finished making sure my house was safe, it was the next thing to do to save the neighbours' houses... [If they were to lose their home] whatever they live for, you would have taken it away from them²⁰⁴.

Given the extent of the damage and the impact on people's lives, it is the view of the Special Inquiry that **the fact no lives were lost should not be used to claim that the response to this fire was an unmitigated success**, or that the State's bushfire prevention, preparedness, response and recovery arrangements are as robust as they could be. They are not. The challenge for the Special Inquiry was to acknowledge the courageous work of the State's volunteers and emergency services personnel in protecting the communities of Roleystone and Kelmscott, while at the same time recognising that significant change is needed to protect these communities into the future.

Many of the reforms recommended by the Special Inquiry have been identified by previous reviews. The Special Inquiry's greatest concern is that if the Roleystone-Kelmscott fire of 6 February 2011 does not serve as a catalyst for meaningful reform, than it may take a bigger tragedy in which lives are lost before the changes that are needed are implemented.

²⁰⁴ Mensink, J – 18 May 2011

To reiterate the point that was made in the opening of this Report, while there is no doubt about the priority of the primacy of life, the question arises whether the only measure of success in dealing with a bushfire is by counting the number of lives lost.

5.2 PEOPLE DISPLACED

As set out in Chapter 4, FESA ordered the evacuation of large parts of Roleystone and Kelmscott in response to the threat posed by the bushfire. The fire and subsequent evacuation lead to the widespread dislocation of people from their homes in these areas. The Department for Child Protection (DCP), as the agency responsible for the State Emergency Management Plan for the Provision of Welfare Support (WESTPLAN Welfare), was subsequently activated to provide assistance to the evacuees. In evidence presented to the Special Inquiry, DCP advised that in response to the fire and the evacuation, it provided assistance to more than 517 affected families²⁰⁵.

Some of these people were evacuated to the Kelmscott Shopping Centre while others were directed to the Roleystone Town Hall, which had previously been identified as a designated evacuation centre. The Special Inquiry heard there was confusion among FESA and DCP as to who had made the decision to use the Roleystone Town Hall in this incident. While the evidence indicates that the decision appears to have been made by an officer of the City of Armadale, the Special Inquiry was concerned that this decision had not been documented in the Incident Action Plan or anywhere else.

The Special Inquiry heard that DCP first became involved in the response to the Roleystone-Kelmscott fire at approximately 1.00pm on 6 February. After liaison with WAPOL, DCP was directed to the Roleystone Town Hall where it was advised an evacuation centre had been established. It remains unclear to the Special Inquiry who made the decision to make use of the Roleystone Town Hall as an evacuation centre. This issue is discussed in greater detail in Chapter 6.

Upon arriving at the Town Hall, DCP established a Welfare Centre in accordance with WESTPLAN Welfare to provide evacuated residents with accommodation services, catering support, personal support, financial assistance and psychological support. However at 5.30pm, a decision was made by FESA Incident Control to relocate the evacuation centre from the Roleystone Town Hall to the Armadale Arena at Forrest Road in Armadale²⁰⁶.

The Special Inquiry understands that the decision to relocate the evacuation centre was taken on the basis that the Armadale Arena is a larger facility with the capacity

²⁰⁵ Follow-up information provided by the Department for Child Protection

²⁰⁶ Ibid.

to accommodate a lot more people, and because it was further removed from the fire ground and deemed to be a safer option by FESA Incident Control. DCP staff and the existing evacuees were subsequently evacuated from the Roleystone Town Hall and moved under police escort to the facility in Armadale²⁰⁷.

The Special Inquiry was concerned by these developments and considers it regrettable that residents who had already been exposed to considerable trauma were subjected to the additional stress of being evacuated a second time under police escort. In its appearance before the Special Inquiry on 3 May 2011, DCP clearly shared the Special Inquiry's concern. DCP's Manager of Emergency Services remarked that:

It [the relocation] is not the ideal because we then actually have to pick people up and move them to another centre. They come in, they register, they get settled, they're obviously in a fair bit of distress at that point in time²⁰⁸.

At the same Hearing, DCP's Director General, Mr. Terry Murphy, went on to say:

The second point we would probably make regarding evacuation centres and the decision as to which evacuation centre is chosen, and it does come out of moving from Roleystone Town Hall to another centre, is...that its really [better to] choose bigger and safer earlier. And these are lessons that I think, you know, we are confident that will be learned but it is not a bad thing to reinforce that.

The Special Inquiry understands that in accordance with existing State arrangements, the establishing of evacuation centres relies on the relevant Hazard Management Agency (HMA), Support Organisations and local governments having considered and selected suitable venues prior to an event. The decision on which of the pre-identified centres should be used is then taken by the HMA after determining from the list of suitable venues the one that is considered the most safe in a particular incident.

The Special Inquiry supports the position of DCP, as outlined in evidence presented to the Special Inquiry following its Hearing, that for bushfire events on the urban fringe, Welfare Centre locations should be selected that are well within the urban environment. Such an approach will avoid a repeat of the events of 6 February that saw evacuees subjected to unnecessary and avoidable distress due to a poor initial decision as to where an evacuation centre should be established.

²⁰⁷ Ibid.

²⁰⁸ Dean, K - Hearing of the Department for Child Protection, 3 May 2011

Once established at the Armadale Arena, the Special Inquiry heard from the community that the evacuation centre was well run and that information was generally available. Residents appreciated the services that were provided and being able to hear first hand from the Incident Controller and FESA Chief Operations Officer about the development of the incident.

However some concerns were raised about the way in which people were informed of house losses. The Special Inquiry heard that the process of directing people to different parts of the Armadale Arena to be informed about the fate of their home was insensitive and could have been better handled. At the same time, the Special Inquiry recognises that there are practical difficulties inherent in undertaking such a task.

Recommendation 36

The Department for Child Protection, the Western Australian Police and the Fire and Emergency Services Authority develop improved arrangements for communicating the loss of home and possessions to persons gathered at evacuation centres with a view to increasing privacy.

As noted throughout this Report, the Special Inquiry understands and endorses the priority placed on the primacy of life. However the Special Inquiry is also of the view that in pursuing this priority, emergency services agencies must give due consideration to the impact that large scale evacuations will have on the community and the homes and infrastructure that are left behind.

Agencies must be ensured that the decision to evacuate is the right one, based on accurate information and cognisant of the impact it will have on people's lives. The distress caused by the decision to displace 517 families should not be taken lightly, particularly if an appropriate evacuation centre has not been identified.

Recommendation 37

Hazard Management Agencies overseeing the response to incidents on the urban fringe select evacuation centres that are well within the urban environment and unlikely to be impacted by the incident.

5.3 HOMES



Fire progressing towards houses – 6 February 2011²⁰⁹

The Kelmscott and Roleystone areas have long been known to be at risk from bushfires and have experienced the trauma of bushfire events before. Despite this, and as discussed in Chapter 2, the Special Inquiry found that there is widespread reluctance among local governments in the Perth Hills, and throughout WA, to make declarations of bushfire prone areas.

As a result, **building standards throughout the Perth Hills that should rightly be considered extremely prone to bushfires, are considerably below the standards that are set out in AS3959-2009.** This was clearly demonstrated by the impact of the fires of 6 February 2011 in which 71 homes were destroyed and a further 39 damaged.

In its assessment of the impact of building standards on house losses in the fire, the Special Inquiry gave primary consideration to the interim report developed by FESA, *Investigation of the House Losses in the Roleystone-Kelmscott Bushfire 6th February 2011*. The Special Inquiry found it regrettable that at the time of writing, a final version of this report was still not available.

²⁰⁹ Photograph courtesy of Leissa Hanley

However, the preliminary information contained within this report indicates that **none of the homes in the fire affected area had been constructed to comply with AS3959**. The Report notes:

*In many instances, such as within Clifton Hills, only a small percentage of homes were constructed after AS3959-1999 was published and there is no retrospectivity where non-compliant homes are required to be upgraded to the new or current standard... Many of the older style homes did not have boxed eaves nor wire insect screens. **They had open eaves which allowed air and then embers to circulate into the roof cavity.** Many also had fiberglass insect screens which when attacked by ember, melted and then any subsequent ember attack permitted entry into the home if the window was left partially open.*

The findings made by the Special Inquiry in Chapter 3 in relation to a lack of local government oversight and deficiencies in the way residents prepare their properties to mitigate the impact of bushfires were also supported by the FESA assessment of house losses. FESA recommends that a 20m Building Protection Zone should be maintained around houses by clearing the area of dense vegetation and other dangerous fuels.

However, it was determined that of the 71 homes destroyed in this fire, 61 of them had tall vegetation within the 20m BPZ in clear non-compliance with FESA's advice. A further 20 homes were damaged to varying degrees by tall vegetation that was within this 20 metre circle²¹⁰. As the Report notes:

*There were 81 homes damaged or destroyed with a fuel load or fuel structure that was not within the criteria advocated by FESA...A fairly common theme is that a significant number of homes did not have an appropriate BPZ as prescribed by FESA and these homes suffered either destruction or damage...**There were no properties that were destroyed by direct flame contact or radiant heat where it was possible to identify (either through owner/occupier advice or visual inspection) that they had developed an appropriate BPZ and Hazard Separation Zone or increased the construction of the home to align with the current AS3959-2009.***

The Special Inquiry finds this a deeply disturbing observation. That effective standards and frameworks such as AS3959 and *Planning for Bushfire Protection Guidelines* are available to mitigate the risk of bushfires but are simply not complied with, or enforced, is considered by the Special Inquiry not to be acceptable, as was discussed in Chapter 2.

²¹⁰ FESA (2011) *Investigation of the House Losses in the Roleystone-Kelmscott Bushfire 6th February 2011*

Until this situation is addressed, local governments will continue to permit development that is not compliant with AS 3959, or with the *Planning for Bushfire Protection* Guidelines, needlessly endangering the lives of the community. This point was clearly illustrated by public statements the City of Armadale made in the wake of this fire, stating that residents whose homes had just been destroyed by a bushfire would be permitted to rebuild 'like for like' in the same area.



*The Grade Road landscape after the fire*²¹¹

In its deliberations on this matter, the Special Inquiry considered the merits of a 'traffic light' assessment system, whereby a green, amber or red rating would be allocated to a property based on the local government's assessment of its bushfire preparedness. This rating system could then be used by responding fire agencies to make a more informed decision about evacuations and *structural triage* based on a building or property's likely 'defendability'²¹².

Unfortunately, the Special Inquiry did not have an opportunity to conduct a detailed assessment of the cost or practicality of such a concept. While not a recommendation, the Special Inquiry is of the view that the potential of this system warrants further consideration.

²¹¹ Photograph courtesy of Max Margetts

²¹² As defined in FESA's *SOP 3.5.6 – Structural Triage*, structural triage in a bushfire context is the classification of buildings at risk according to their level of 'likely defendability'. Structural triage is undertaken prior to the arrival of the firefront to ensure resources are deployed where they will have the greatest effect

Similarly, the Special Inquiry received a number of submissions outlining the importance of local government and the community selecting and planting vegetation types that are suitable for the peri-urban environment in terms of minimising fire risk to mitigate the impact of bushfires. In their submission to the Special Inquiry, Mr and Mrs Max and Barbara Margetts explain:

*...the planting of fire-retardant plants in residential gardens; semi-rural properties; urban parkland; and alongside road verges can slow the progress of a fire...on the other hand, fire –accelerant vegetation such as gum trees, bottlebrush, tea-trees, conifers and pine trees contain volatile oils and resins and release a lot of energy when they burn...*²¹³

The Special Inquiry notes that Mr Margetts played a central role in the development of *Selecting Plants for a More Fire-Retardant Garden*, a City of Armadale branded publication that was produced in the wake of the Roleystone-Kelmscott fire.

The document provides a range of practical advice on how residents can better select and manage the vegetation in their gardens to reduce fire risk. The Special Inquiry heard from a number of community members about the important impact fire-retardant plants had on limiting damage to their homes on 6 February and considers that the concept of 'protective planting' warrants further research as part of a broader approach to bushfire mitigation.

Local Government and communities alike must share the responsibility to keep their communities safe. Building community resilience will require some inconvenience from time to time, however it is important to ensure that this responsibility is taken on by everybody so that the community can enjoy the collective freedom of a lifestyle choice that is for everyone.

Recommendation 38

Local governments institute a comprehensive program to assess fuel loads and bushfire preparedness on private properties. The program should give reference to the creation and maintenance of a Building Protection Zone, in line with FESA guidelines.

This program should be implemented and managed under the *Bush Fires Act 1954* in a manner similar to the fire break inspection program.

²¹³ Submission of Max and Barbara Margetts

The Special Inquiry's concerns in relation to building standards in the Perth Hills extends to the use of evaporative air conditioners. This issue attracted significant attention in the wake of the fire and based on evidence provided by FESA, the Special Inquiry found that:

*Of the total homes destroyed by the fire, 35 had evaporative air conditioners and of the houses damaged, seven had evaporative air conditioners. A reasonable number of these home were in the Clifton Hills area*²¹⁴.

At the time of writing, FESA had not definitively concluded that the cause of fire in each of these 35 houses could be attributed to the presence of an evaporative air conditioner. However, while some further analysis remains to be done on the precise cause and effect, the Special Inquiry was alarmed by the fact that **of the houses destroyed in this fire, virtually 50 per cent had been fitted with evaporative air conditioners** with no apparent retrofit to protect them from ember attack.

The Special Inquiry was particularly concerned given evidence it heard earlier in the review about the ease with which evaporative air conditioners (and the home they are attached to) could be safeguarded against ember attack in bushfires. Mr. David Lamont, Manager of Water Policy and Strategy with FESA, appeared before the Special Inquiry on 4 May 2011.

Mr. Lamont had previously overseen a research project in conjunction with the University of Western Australia that assessed the different methods of protecting evaporative air conditioners from ember attack and subsequent combustion. The Special Inquiry heard that:

*During our research, we found that it would probably cost between two and \$500 for the ember screen to be [put] over the pads*²¹⁵.

The Special Inquiry heard that these pads could be retrofitted to existing units and would dramatically increase their resistance to ember attack. Other options were also identified that came at a slightly increased cost, including internal ember guards and fire retardant filter pads, that are estimated to cost around \$300 (approximately twice the price of normal pads)²¹⁶.

Despite the range of options available and the relative ease with which these measures can be implemented, **the Special Inquiry was disappointed to find that very few people had taken the proactive step to better protect their air**

²¹⁴ Ibid.

²¹⁵ Lamont, D – Hearing 9 May 2011

²¹⁶ Ibid.

conditioner and their home from bushfire attack. As was noted by Mr. Lamont in his evidence to the Special Inquiry:

*I think it [the reason these measures have not been widely taken up] is cost, but its [also] something I observed over a lot of years being involved in this area, **that everyone thinks that the emergency isn't going to affect them.** It will be the person down the road or someone else, but it will never be them that is going to be threatened at some time.*

The Special Inquiry found that the reluctance of residents to proactively install measures to better protect their homes was compounded by the hesitance demonstrated by local governments throughout WA to declare bushfire prone areas. As was discussed in Chapter 2, a declaration of a bushfire prone area triggers requirements for properties in those areas to build in accordance with AS3959-2009.

This Australian Standard deals specifically with the issue of evaporative air conditioners and requires that for buildings within a defined bushfire attack level, ‘...all openings into the evaporative cooling unit must be protected by corrosion-resistant steel or bronze mesh...²¹⁷’. Therefore if a more robust and objective assessment was taken to the declaration of bushfire prone, the risk posed to the community by the presence of evaporative air conditioners would be significantly reduced.

Based on the evidence presented to it, the Special Inquiry is of the firm view that **urgent steps must be taken to address the deficiencies in planning and building laws and regulations in the Perth Hills to better protect the community from the risks of bushfire.** This issue was considered by the Victorian Bushfires Royal Commission and contributed to the development of the Royal Commission’s Recommendation 51:

- *The Victorian Building Commission, in conjunction with the Country Fire Authority, develop, publish and provide to the community and industry information about ways in which existing buildings in bushfire-prone areas can be modified to incorporate bushfire safety measures.*

²¹⁷ Standards Australia AS3959-2009 *Australian Standard Construction of buildings in bushfire-prone areas*

Recommendation 39

State and locals governments:

- a) recognise that regardless of future declarations of bushfire prone areas, the existing planning and building problems in the Perth Hills related to bushfire risk will persist;
- b) urge residents in these areas to retrofit their homes and evaporative air conditioners in compliance with AS 3959 - 2009;
- c) examine options to retrospectively bring these areas into compliance with *Planning for Bushfire Protection Guidelines*.

As discussed in Chapter 2, the Special Inquiry recommends that FESA and the Real Estate Institute of Western Australia ensure new residents receive information about bushfire risk and steps that can be taken to mitigate this risk. In line with this recommendation, the Special Inquiry is of the view that title deeds on properties in bushfire prone areas should reflect the risk of that locality, consistent with the identification of flood plains on title deeds in parts of WA and other jurisdictions.

Recommendation 40

The State Government mandate that the title deeds for relevant properties be amended to indicate if the property is in a declared bushfire prone area.

5.4 INFRASTRUCTURE

Power

The Special Inquiry heard that at 1.33pm on Sunday 6 February, Western Power turned off the 'recloser' leading into Kelmscott and Roleystone, resulting in the complete loss of power to between 1500 and 1600 properties. Due to the position of the recloser in the electricity distribution network, power was also shut off to a number of properties beyond the fire ground. Western Power acted in the interests of safety and on the advice of its staff at the fire ground who were working in consultation with FESA²¹⁸.

²¹⁸ Brown, K. – Hearing of Western Power, 4 May 2011

Western Power infrastructure subsequently suffered considerable damage as a result of the fire. As Western Power explained in its appearance before the Special Inquiry on 4 May 2011:

We had 72 poles destroyed and subsequently the wires attached to those poles were damaged as well, and lead-ins to houses were burnt away, so there was significant...damage as an outcome of the fire²¹⁹.

The damage done to the State's electricity infrastructure and the associated impact on the community led the Special Inquiry to explore with Western Power (and others), the options that are available to better protect this critical infrastructure from damage during bushfires. The Special Inquiry heard that new power poles for bushfire prone areas are now produced and pre-coated with a fire-retardant to around two metres above ground level to resist the impact of fire.

Western power has also commenced a process of hand painting existing poles with fire-retardant in bushfire prone areas. This is a practical and worthwhile initiative, the value of which was demonstrated in the Roleystone-Kelmscott fire where the poles that had been treated with retardant remained standing²²⁰.

A number of submissions to the Special Inquiry raised the need for Western Power to implement a comprehensive underground power program in all bushfire prone areas to minimise the potential for damage during a bushfire. The comments of Mr Bruce Waddell, a resident of Roleystone, in his submission were reflective of a broader view that exists in the community:

There needs to be concerted pressure placed on Western Power to implement, as a matter of urgency, the placing of power lines underground in bushfire prone areas. Shutting power off to protect fire fighters from the risk of live fallen power lines has wider ramifications in the maintenance of water supply and domestic fire fighting situations. It will also eliminate the risk of fires starting as a result of above ground wires clashing, branch contacting arcing or pole collapse²²¹.

The Special Inquiry heard that Western Power is already well progressed in delivering a State Underground Power Program (SUPP) that, among other things, better protects its infrastructure from damage in bushfires. Western Power's Managing Director, Mr. Doug Aberle explained:

We've currently got about 53 per cent of the metro area undergrounded. That's a combination of all new subdivisions being undergrounded, [which

²¹⁹ Casey, O – Hearing of Western Power, 4 May 2011

²²⁰ Aberle, D – Hearing of Western Power, 4 May 2011

²²¹ Submission of Mr. Bruce Waddell, p. 4

has] been mandated for a while, and we're also retrospectively undergrounding older areas at the rate of about one per cent per annum, and that's been running for quite some time. The net impact of that is that we're migrating the metropolitan area, at least, to underground [power]...

The Special Inquiry heard that while undergrounding power reduces the likelihood of losing power in a bushfire, it does not guarantee that power will remain available. In its evidence to the Special Inquiry, Western Power explained that if the fire was significant enough to consume entire houses, as was the case in Roleystone and Kelmscott, then there would be a risk that the house's own isolation would not work or would be melted to a point where it would no longer function.

In such a situation, Western Power would need to assume that live electricity could be flowing through unprotected wiring and move to isolate that part of the network, much in the same way it would if a power pole was burnt down²²². The Special Inquiry considers this is important information to share with the public as **the common assumption is that underground power will solve all electricity supply problems in a bushfire. This is not the case.**

Furthermore, the roll-out of the SUPP is heavily constrained by the significant costs associated with undergrounding power infrastructure. Currently, Western Power invites expressions of interest from local governments interested in participating in the program and makes a technical assessment about the respective merits of each application.

Western Power presented evidence that indicates this assessment process is heavily impacted by the fire risk of a given area, but also by considerations such as the age of the infrastructure in the respective local government areas²²³. Once a determination has been made on which local governments will participate in the program, a cost sharing agreement is put in place that sees the local government contribute approximately half of the cost, with the remainder split between Western Power and the State Government²²⁴.

The Special Inquiry heard that due to a range of factors, the cost of implementing this program in the local government areas of the Perth Hills is often considerably more than in other parts of the metropolitan area. As Western Power noted in its evidence:

At the moment... the councils essentially pick up half of the cost and that's passed on to the ratepayer one way or the other, and then there's a contribution from us and government...[However] a lot of the bushfire-prone

²²² Aberle, D – Hearing of Western Power, 4 May 2011

²²³ Ibid.

²²⁴ Ibid.

areas like Roleystone and Darlington and the Hills areas that we have the most concern about [in terms of fire risk] are actually not very friendly to undergrounding, because they're granite or gravel, and you can't horizontal bore, so the actual cost per lot goes up enormously... [those areas are] sparsely populated as well, which is another multiplier, so you wind up with a very heavy cost burden...

The Special Inquiry considers that the current framework governing the roll-out of the SUPP is appropriate and that it is ultimately the responsibility of each local government to make a determination as to whether it is of value to participate. This decision should be based on a thorough cost-benefit analysis and in recognition of the inevitable upward pressure it will place on rates in the area.

The expense associated with the program in the Perth Hills is evidenced by the fact that **the City of Armadale has not made an application to be included in the SUPP in the last 2 round of the program between 2006-2011**²²⁵. In recognition of the cost impost and the difficulties of installing underground power in local government areas such as the City of Armadale, Western Power is considering a range of options to better protect its network from bushfires:

we've...been experimenting with alternatives like aerial bundled conductors, which is the conductors wrapped together in...[a] big piece of insulation, you get something [quite] big, quite ugly, but it's much more resistant to vegetation contact ...It's a bit of a compromise, but you don't have the cost of the undergrounding, per se, but you've got something safer...

and continued;

*...We're [also] currently considering a new [fire resistant power pole being tested at] a pilot plant in Geelong, that's looking at glass fibre – spun glass fibre and concrete. We work with all the other utilities around the country, because we've all got the same kind of challenge. So we keep looking for that, but at the moment, the best resource we've got is the plantation timber*²²⁶.

Based on the evidence presented to it, the Special Inquiry was satisfied that **Western Power is taking appropriate steps to ensure that its network is protected against the risk of bushfires**. However in much the same way as there are only so many steps homeowners can reasonably take to mitigate the risk posed by bushfires, the Special Inquiry recognises that Western Power's electricity network,

²²⁵ Follow-up information provided by Western Power, 20 May 2011

²²⁶ Aberle, D – Hearing of Western Power, 4 May 2011

which traverses the most bushfire prone areas in the State, will inevitably be exposed to a certain level of risk that cannot be eliminated.

The Special Inquiry heard in evidence and discussions with the community frustrations about authorities refusal to permit residents access back into the fire affected area after the fire front had passed. Many of these people commented to the Special Inquiry that if Western Power had cut off power to the area, then the fallen wires and other damaged electricity infrastructure did not present a risk to their safety as they were being told it did by FESA and the Western Australian Police (WAPOL).

In this situation, some residents felt they should therefore be allowed to re-enter the fire affected area to inspect their properties. In response to questioning by the Special Inquiry, **Western Power explained that although power to that area had been cut off, the potential risk to human safety was such that it is required to follow a very conservative approach before residents could be allowed back in:**

So the danger, as a general rule, is [that part of the electricity network] has been isolated to allow fireys to get in. There may be poles down. We may or may not start to work backwards to re-energise, and unless you've been really clear about what's happened there, you can't be absolutely certain [that the wires aren't live], so you have these blanket positions that default to safety²²⁷.

As noted throughout this report, the Special Inquiry endorses the focus on *primacy of life* and supports the position of FESA, WAPOL and Western Power to err on the side of caution when it comes to re-entry into a fire ground. While noting the community's frustrations at being held back, it is the view of the Special Inquiry that **to allow re-entry before the fire ground has been properly assessed and made safe would be to unnecessarily place life at risk.** Having said that, the re-entry permit discussion in Chapter 4 may enable some flexibility on this issue.

The Special Inquiry was concerned by numerous reports of power poles being lost to small, smoldering fires many hours after the main fire front had passed. As discussed extensively in Chapter 4, FESA's decision to focus on 'life, not property' meant that the protection of infrastructure was not accorded a high priority as part of the response to the fires.

²²⁷ Aberle, D – Hearing of Western Power, 4 May 2011



Power pole on fire in Kelmscott – 6 February 2011²²⁸

The loss of electricity infrastructure has a significant impact on residents both in terms of when they are allowed back into the fire ground, and on the welfare of those residents who chose to stay behind and are left without power for a number of days. The Special Inquiry hopes these factors are given due consideration by Incident Controllers when responding to bushfires. In a related matter, the issue of ‘dynamic decision-making’ is further discussed in Chapter 4.

The Special Inquiry received a number of positive reports from the community about the work of Western Power crews in getting power restored as soon as possible. In its evidence to the Special Inquiry, Western Power advised that it had the majority of the affected residents reconnected to the electricity network within 48 hours of the fire. It also stationed a ‘Caravan’ at the Armadale Arena for a week from Monday 7 February to provide the community advice about repairs to the network in an effort to ensure they were kept informed of the most up to date information²²⁹.

The Special Inquiry formed the view that Western Power was very aware of the impact of its operations on the community and they work hard to ensure their share of the responsibility is being delivered now and into the future.

²²⁸ Photograph courtesy of Mr Jos Mensink

²²⁹ Aberle, D – Hearing of Western Power, 4 May 2011

Water

The Special Inquiry heard in evidence and in discussions with residents significant concerns about the loss of scheme water supply and drastic drops in water pressure during the fires. While it was clear from these discussions that not all residents were affected by either a loss of water or drop in water pressure, for those who were it presented considerable cause for alarm.

It was also evident from these discussions that a number of **residents clearly expected that scheme water would be available throughout the duration of a bushfire event to enable them to combat the fire.** The Special Inquiry found **this was a misplaced and erroneous expectation.**

In its appearance before the Special Inquiry on 12 April 2011, the Water Corporation (the Corporation) provided an overview of the water supply infrastructure that services the Roleystone area. The Corporation's Regional Business Manager of the Perth Metropolitan area, Mr. Graeme Sneddon explained:

... Roleystone receives its water supply [from] the Canning Dam, and its fed into that area through the Canning trunk main. It then goes through a pressure-reducing valve to bring it down to an acceptable pressure...It [then] goes to a pumping station called Soldiers Road Pump Station and from there it pumps up the hill to various tanks. The first one is Peet Road, and from there it pumps up to the next tank further up the escarpment, which is Northwood Road, and then from there it pumps further up the road to the final tank in that system which is Brooks Road²³⁰.

The Corporation supplemented this advice with further information provided in its submission to the Special Inquiry which noted:

While the source water for this area is generally from the Canning or Wungong Dams, it should be noted that the supply network for the Perth metropolitan area is an integrated system and there is capacity to draw water from multiple sources to supply most areas of the city. Bulk water can be drawn from the surface water dams located along the escarpment, from major groundwater reserves or from the existing desalination plant²³¹.

The Special Inquiry understands that while the two water supply tanks in the Kelmscott area are independent systems, the three tanks in the Roleystone area are configured in an integrated 'in-series' set-up. This means that getting water to each tank in the series relies on having water available in the tank immediately below it.

²³⁰ Sneddon, G – Hearing of the Water Corporation, 12 April 2011

²³¹ Submission of the Water Corporation, p.2

In this way, the Peet Road Tank feeds the Northwood Road Tank, which in turn feeds the Brooks Road Tank²³².

At 1.28pm on 6 February 2011, power was lost to the Soldiers Road water pumping station that supplies the Peet Rd Tank²³³. The loss of power was due to a wider shut-down initiated by Western Power discussed in the previous section. The loss of power to the Soldiers Road pumping station temporarily prevented the Corporation from feeding water into the Peet Road Tank, which in turn prevented additional supply being channeled into the Northwood and Brooks Road tanks further up the escarpment²³⁴.

However, as was pointed out by the Corporation in its appearance before the Special Inquiry, losing power does not necessarily mean that people who are dependent on these tanks will run out of water. The Special Inquiry heard that **if the tanks are relatively full when the power goes out then they will continue to feed the properties that are dependent on them until the water supply drops below a certain level**. Once this happens, residents in the affected area will progressively receive lower water pressure before eventually losing supply all together.

Evidence provided by the Corporation indicates that at the time power was lost to the pumping station, the available storage under normal demand conditions in the Peet Road Tank would have been enough for about 28 hours of supply. However under the extreme demands caused by the bushfire, the Corporation estimates that the available supply would only have been sufficient for between eight and nine hours²³⁵. Based on these estimates, the Corporation determined that:

...some customers, particularly those closest to the tank, would have been without water between 9.15pm and 11.15pm²³⁶.

As outlined in the discussion above, **the complete loss of water would have been preceded by a period of reduced water pressure for those properties dependent on the Peet Road Tank**. While reduced water pressure may also have extended to those properties dependent on the Northwood and Brooks Road tanks, evidence provided by the Corporation indicates that neither of these tanks ran out of water during the fire²³⁷.

In response to the loss of power at the Soldiers Road pumping station and in recognition of the water in storage at the Peet Road Tank, the Corporation made

²³² Ibid., p.1

²³³ Ibid., p.4

²³⁴ Snedden, G – Hearing of the Water Corporation, 12 April 2011

²³⁵ Submission of the Water Corporation

²³⁶ Ibid.

²³⁷ Ibid.

arrangements at approximately 6.00pm to get a 380 kilovolt-amps (KVA) generator to the site. Power was available via the generator by 8.39pm²³⁸. However due to unanticipated electrical wiring requirements, the generator could not be used to run the pumps and the water level in the tank continued to drop.

The Corporation's scheme operators subsequently identified and made arrangements for an alternative supply to the Peet Road tank from the Canning Trunk Main. By the time this alternative solution was implemented it was around 11.00pm. The Corporation estimates that by 11.15pm, the water level in the tank would have risen sufficiently to return supply to customers²³⁹.

While the Special Inquiry finds the loss of water and its associated impact on residents regrettable, it strongly concurs with the view of the Corporation and other water utilities in Australia that **residents should not expect mains water supply to be available during a bushfire**. This point was well made by the Corporation in its submission to the Special Inquiry:

*...while we [the Water Corporation] make every effort to maintain water supply to areas during a bushfire event, we cannot guarantee supply. **Due to the potential loss of power in such events, and/or due to extremely high demands that may be placed on the water supply system, there is high potential for the water supply to be interrupted completely or be operating at significantly reduced pressure.***

The Corporation continued:

*It is our belief that while the risk that water supply may be interrupted is communicated on both [the FESA and Water Corporation] websites, the awareness of this risk is not well known within the community. More explicitly, we believe that the message should be strengthened to emphasise that homeowners should only stay if they have both alternative sources of water (eg pool, rainwater tanks etc...) and an alternative power supply. **We will always do all that we possibly can to maintain supply but achieving that should be a bonus for property protection efforts rather than something that is to be relied upon***²⁴⁰.

As discussed in Chapter 2, the Special Inquiry strongly supports the view expressed by the Corporation and feels that further work is needed to appropriately inform the community about the potential that scheme water will not be available during a bushfire.

²³⁸ Ibid., p.4

²³⁹ Ibid.

²⁴⁰ Ibid., p.2

The Special Inquiry formed the view that the Water Corporation is working to take its share of the responsibility to build community resilience to bushfire through its operational activities and information programs.

Recommendation 41

Western Power and the Water Corporation continue to work collaboratively to assess options to better protect the power supply to water pumping stations in bushfire prone areas.

5.5 INSURANCE

The Special Inquiry heard in evidence from the Insurance Council of Australia that 501 claims to a total value of \$38 million were received by the insurance industry as a result of the Kelmscott-Roleystone fire of 6 February 2011. These claims were spread across a range of categories including:

- Residential Property
- Residential Contents
- Domestic Vehicle
- Commercial Property
- Commercial Vehicle
- Business Interruption
- Rural/Farm

The Insurance Council of Australia also provided the Special Inquiry with evidence indicating that although different companies take different approaches to the calculation of bushfire risk in an insurance premium, the percentage of a premium that relates to bushfire risk, even for those areas deemed to be high risk, is relatively low²⁴¹. The evidence also indicated that insurance premiums are calculated predominantly based upon relative levels of risk to common perils.

The Special Inquiry heard that based on this approach, **the more widespread declaration of bushfire prone areas would not result in a significant increase to household insurance premiums.** This is because even if an area which had not previously been declared as bushfire prone was declared, its actual exposure to bushfire risk would not have changed as a result of the declaration. This is an important consideration for Government in its assessment of the Special Inquiry's recommendation related to the declaration of bushfire prone areas.

²⁴¹ Evidence provided by Karl Sullivan, Insurance Council of Australia, 5 May 2011

In fact, in discussions with the insurance industry, the Special Inquiry heard that broader declarations of bushfire prone areas and compliance with AS3959 may place some downward pressure on premiums by requiring the construction of safer, more defensible buildings that are less likely to be destroyed in a bushfire.

It was noted by the Special Inquiry that insurance companies take on the risk of their policies without ever viewing the location of the property or the construction materials that are used in homes. That, of course, is a matter for the industry. However it is assumed by the Special Inquiry that the more houses contained within developed areas comply with all known defences against bushfire, the faster resilience levels among these communities will rise to a point that reduces the call on insurance.

CHAPTER 6: THE FUTURE

6.1 BUREAU OF METEOROLOGY PREDICTIONS

As outlined in Chapter 3, the Roleystone-Kelmscott fire followed low rainfalls across the State, above average mean temperatures, a number of heat wave events and drier than average drought indices.

The Special Inquiry received evidence about the impact of the last few hot summers on the Perth Hills fires. The dry winters also had an impact so the Special Inquiry sought more information about dryness from the Bureau of Meteorology (BOM)²⁴².

The BOM told the Special Inquiry that future projections of rainfall suggest an expected decline of two per cent to 20 per cent by 2030 and five per cent to 60 per cent by 2070 dependent on global greenhouse gas emission scenarios.

The BOM also indicated that the mean 10 metre wind speed in southern parts of southwest WA during summer is likely to increase by two per cent to five per cent by 2010, with the area of increased wind speeds expanding to the remainder of southwest WA by 2070²⁴³. Again, the range of percentage change is dependent on future emission scenarios.

The surface relative humidity (relative to the 1980 to 1990 period) in northern parts of southwest WA during summer is likely to decrease by up to one per cent by 2030. By 2070, the whole of southwest WA is likely to experience a relative humidity decrease of one per cent to three per cent depending on emission scenarios²⁴⁴. The BOM noted that the percentage of extremely dry events observed in an easterly wind has gradually increased since the late 1970s²⁴⁵.

There has to be a point in time when the Government recognises the climate is changing and uses this as a catalyst for reviewing and reforming policies that are affected by climate.

²⁴² Bureau of Meteorology *Meteorological Aspects of the Red Hill/Gidgegannup and Kelmscott/Roleystone Fires of 5 and 6 February 2011 Additional Information*, Perth, WA, 21 April 2011, p.7. Projections in BOM's report to the Special Inquiry are drawn from the International Panel for Climate Change, the Indian Ocean Climate Initiative and the Climate Change in Australia report.

²⁴³ *Ibid.*, p.10

²⁴⁴ *Ibid.*, p.10

²⁴⁵ *Ibid.*, p.10

Recommendation 42

The State Government recognise the projected changes in climate and potential impact on future fire events.

6.2 PERI-URBAN DYNAMICS

The population in some local governments areas in the Perth Hills is expected to increase significantly over the next decade.

This is demonstrated in table 5:

Table5: Projected increases in population in selected local government areas in the Perth Hills²⁴⁶

LGA	Estimates of current population ²⁴⁷		2021 Projection ²⁴⁸
	2009 Estimated Population ²⁴⁹	2011 Population Projection ²⁵⁰	
Armadale	58,153	60, 800	78,500
Mundaring	38,267	36,100	40,600
Serpentine-Jarrahdale	16,492	16,100	25,500
Swan	110,051	108,900	145,100

Real estate in the Perth Hills is increasingly being marketed as offering a 'tree change'. In 2006 *The West Australian* reported that increasing prices along WA's south-west coast were fuelling a shift in migration trends, with some people 'turning away from the beach and looking to the trees'²⁵¹. *The West Australian* quoted real estate agents who said that the tree-change trend was primarily brought on by rising house prices on the coast. One agent noted that people looking for a tree change

²⁴⁶ This table has been compiled by the Special Inquiry based on information sourced from Western Australian Planning Commission (2005) *Western Australia Tomorrow, Population projections for planning regions 2004 to 2031 and local government areas 2004 to 2021* and Australian Bureau of Statistics (ABS) National Regional Profiles

²⁴⁷ It is difficult to determine the current population. To provide an estimate, information is provided on WAPC's projections for 2011 (made in 2005) and the latest ABS estimates which are for 2009

²⁴⁸ Data from WAPC *Western Australia Tomorrow*, op.cit. These projections were made in 2005 however an updated version is expected to be released in September 2011

²⁴⁹ Data from ABS National Regional Profiles

²⁵⁰ Data from WAPC *Western Australia Tomorrow*, op.cit. These projections were made in 2005 of 2011 population levels

²⁵¹ Keys, L 'Bush retreats are popular' *The West Australian* 14 October 2006, p.103

were looking for areas closer to Perth, naming the Perth Hills areas as ‘*the next big thing*’, with Roleystone specifically identified as one of the future top 5 tree change destinations.

This increase in population, with new residents looking for a bush lifestyle, reinforces the need for effective communication about bushfire preparedness and risks (see Recommendations 6, 7, and 8) and comprehensive information packages for new residents (Recommendation 9).

It is critical that the demand for development in the Perth Hills is cognisant of the level of bushfire risk, and that future development and construction is designed to mitigate against this risk (Recommendations 3 and 4).

The Special Inquiry understands that the University of Western Australia School of Earth and Environment is conducting research into the social demographic trends for the Perth Hills. This research needs to be supported so as to properly inform the Western Australian Planning Commission for future projections.

6.3 SHARED RESPONSIBILITY AND RESILIENCE

The Special Inquiry strongly believes that bushfire risk management is a shared responsibility, which relies upon all relevant agencies and community members working together effectively.

This shared responsibility, understanding and commitment needs to be underpinned by contemporary and relevant policies and legislation, effective coordination mechanisms at the State and local level and active engagement with local communities.

The Special Inquiry is aware of examples where communities are working together to manage bushfire risk and look after each other. For example, people told the Special Inquiry about the ‘fire trees’ used by Bushfire Ready Action Groups. As Roleystone resident Greg Jenkins described it:

. . . what a fire tree does is it’s an early alert system for a start. That anyone who sees or smells – sees a fire or sees smoke or hears on the radio that there’s a fire, rings the next person in the chain and then that chain goes all the way around until it gets back to the original person²⁵².

²⁵² Jenkins, G – Hearing 6 May 2011

Policy and Legislation

As outlined in Chapter 2, management arrangements, responsibilities and procedures for State Government agencies involved in bushfire prevention, preparedness, response and recovery in Western Australia is governed by WESTPLAN-BUSHFIRE²⁵³ and a series of emergency management policies.

The Special Inquiry recommends changes to the State Emergency Management Policy 4.1.

State Emergency Management Policy 4.1²⁵⁴ (SEMP 4.1) sets out the State's operational management policy for emergencies. It notes that:

For emergency management response and recovery operations to be effective, they must be based on a common set of principles and structures utilised by all emergency management agencies involved.

These principles and structures are set out in SEMP 4.1.

The Special Inquiry was concerned that the policy is based on a structure of inverted decision making, where those people in the most senior positions, who are ultimately held accountable for the decisions taken and the outcomes achieved, can be the last to know that a situation has escalated.

The Special Inquiry recognises that emergency operations are based on the principle of 'graduated response', which means the responsibility for resourcing and responding to an emergency initially rests at the local level. While not disputing this principle, the Special Inquiry is concerned that this devolved decision making model relies upon high levels of cooperation and trust between agencies and the skill and judgment of lower level staff. Agencies must essentially self-assess whether they have the capability and resources to respond to an incident.

Agencies could potentially wait too long to ask for help or to raise the level of an emergency. The incident controller ultimately has the responsibility to declare the level of an incident but as has been highlighted in Chapter 4, FESA is not complying with the declaration process, or communicating the incident level to other agencies.

²⁵³ SEMC (2010), WESTPLAN-BUSHFIRE, op.cit.

²⁵⁴ SEMC (2010), SEMP 4.1, op.cit.

The Special Inquiry recommends SEMP 4.1 be reviewed. The revised SEMP 4.1 should:

- give clear and explicit direction about when and how an incident should be declared
- clearly articulate the actions to be taken
- clearly define accountabilities
- provide detailed criteria for elevating issues and engaging other agencies.

The Special Inquiry also recommends (Recommendations 25 and 26, Chapter 4) that FESA develop procedures to ensure its staff comply with the requirements of both WESTPLAN-BUSHFIRE and SEMP 4.1.

Recommendation 43

The State Emergency Management Committee amend State Emergency Management Policy 4.1 (*Operational Management*) to:

- give clear and explicit direction about when and how an incident should be declared
- clearly articulate the actions to be taken
- clearly define accountabilities
- provide detailed criteria for elevating issues and engaging other agencies.

As noted in Chapter 4, the legal powers vested in agencies during an incident needs to be clarified. FESA and the Western Australian Police disagree as to whether a section 13 declaration under the *Bush Fires Act 1954* gives the Police clear and adequate powers, particularly in relation to evacuations, when compared to an emergency declaration under the *Emergency Management Act 1995*. The Special Inquiry recommends this be resolved urgently (Recommendation 31).

In any event, the Special Inquiry considers the State Emergency Coordinator should have the legislative authority to declare an emergency situation. This is in keeping with the discussion on SEMP 4.1 above and the Special Inquiry's view that those people in senior positions should play a more active role in decision making.

Recommendation 44

The State Government amend section 50 of the *Emergency Management Act 2005* to allow the Chair of the State Emergency Coordination Group to declare an emergency situation.

State Level Coordination

The Special Inquiry considers that the development, management and implementation of emergency management policy and legislation must be done in collaboration with all relevant agencies.

As outlined in Chapter 4, the Special Inquiry found that FESA had not complied with the State's emergency management plans. It is for this reason that the Special Inquiry considers that the policy and emergency management planning function undertaken by Emergency Management Western Australia should be clearly separated from FESA's operational role. This is discussed further in section 6.3.4 and options are presented in Recommendation 46.

In line with this, the Special Inquiry also recommends all relevant agencies be actively involved in developing the new emergency management legislation (Recommendation 2, Chapter 2).

As discussed in Chapter 2.4, WESTPLAN-BUSHFIRE²⁵⁵ does not specify where State Emergency Coordination Group (SECG) meetings should be held. The Special Inquiry found it was common practice to hold SECG meetings for fires at the premises of the Hazard Management Agency (HMA). This means the SECG meeting for the Perth Hills fire was held at FESA House. Emergency Management Western Australia told the Special Inquiry that holding SECG meetings at the HMA premises can be beneficial as it minimises the time taken by operational staff to brief the SECG.

The Special Inquiry heard²⁵⁶ that FESA is developing a new State Operations Centre as part of its new headquarters at Cockburn Central. While the Special Inquiry accepts that the new FESA State Operations Centre will assist FESA in their role as an HMA, and supports the integration of other agency staff into the Centre during incidents, the Special Inquiry does not believe it is appropriate for the FESA Headquarters – or the premises of any HMA – to serve as the venue for SECG meetings.

Effective briefing of key personnel is a valuable discipline and meeting in a location such as the State Coordination Centre (SCC) should not detract from effective decision making at the highest levels. If proper and focused briefings are followed, the SCC should provide an ideal setting for informed and objective decision making. It is, after all, the purpose for which the SCC was created.

²⁵⁵ SEMC (2010), WESTPLAN-BUSHFIRE, op.cit.

²⁵⁶ Submission of the Fire and Emergency Services Authority

Recommendation 45

Emergency Management Western Australia and the State Emergency Management Committee amend WESTPLAN-BUSHFIRE to require State Emergency Coordination Group meetings to be held at the State Coordination Centre in West Leederville.

The Special Inquiry was asked to review the *improvements that can be made in relation to the coordination of activities across all levels of government, including with volunteer groups*²⁵⁷.

The Special Inquiry has faithfully attempted to fulfill that role and in doing so needs to point to some serious shortcomings in this area.

Effective coordination depends upon professional and collaborative relationships between agencies. **The Special Inquiry was repeatedly told that the relationship between FESA and DEC was not collaborative**, and at times adversarial. For example, a Volunteer Bush Fire Brigade member told the Special Inquiry that the relationship between DEC and FESA was ‘*very broken*’. He also said that:

*Their communication and relationship, especially on the firegrounds, is disappointing to see a lot of the time*²⁵⁸.

It is troubling that the fractured relationship between these agencies is well known not only in Western Australia, but across the country. The fire management responsibilities shared by these agencies mean that the people of Western Australia rely on them to work together effectively.

The animosity between agencies was palpable in the way FESA management presented its Submission to the Special Inquiry, specifically criticising the role of DEC during the Roleystone-Kelmscott fire, saying that:

*DEC sent a representative to the incident management team who arrived late into the fire and never fully integrated into a formal functional position within the AIIMS structure at the incident management team. This led to the DEC representative operating in relative isolation more as a liaison officer than being an active member of the IMT*²⁵⁹.

²⁵⁷ Term of Reference 5

²⁵⁸ Fancote, G – Hearing 6 May 2011

²⁵⁹ Submission of the Fire and Emergency Services Authority, p.283

This criticism was not supported by FESA's Incident Controller Gary Kennedy when he appeared before the Special Inquiry. Mr Kennedy told the Special Inquiry that the DEC officer in the Incident Management Team '*played the role we expected of them*'. He also said that '*they* (FESA management in their submission) *downplayed the exact role he did play*'²⁶⁰. **If the officers involved in the IMT were not consulted as to the accuracy of this statement, the question arises as to who in FESA created this part of their Submission. What was the motive in presenting information to the Special Inquiry that was erroneously critical of DEC?**

A lack of understanding at the operational level was also clear as Incident Controller Paul Ryan did not know that the fire ground bordered the Banyowla Regional Park – managed by DEC – and indeed entered that land.

Q: *Just to make sure I've not misunderstood, there are parts of this area where the fire occurred that adjoined DEC land?*

RYAN: *Predominantly, no*²⁶¹.

Mr Ryan also said:

*DEC preformed teams do add flavour, but I question the capability or the ability of that group to come in a timely fashion to assist . . .*²⁶²

Unfortunately this suggests that the strained relationship at a management level impacts directly – and adversely – during incidents. The Special Inquiry heard further evidence of this in Submissions it received about the operation of the *Zone 2 and 2A Operational Protocols* (the Protocols).

Zone 2 and 2A are special bushfire response zones that have been established in the Perth Hills due to the severity of the bushfire risk in that area. **The Protocols were developed to provide automatic, rapid response by fire agencies to reported fires in the Perth Hills.** However, as was outlined by DEC in its Submission to the Special Inquiry:

...the documentation is somewhat ambiguous about whether the response is actually automatic and, as a consequence, there has been a drift toward a managed response.

²⁶⁰ Kennedy, G – Hearing 9 May 2011

²⁶¹ Ryan, P – Hearing 9 May 2011

²⁶² Ryan, P – Hearing 9 May 2011

In follow-up information provided to the Special Inquiry, DEC continued;

The ambiguity...arises from the terminology in the Protocols document that may be understood to convey different intentions. In the section headed 'Zone 2 and 2A Response'...the first sub-heading 'Automatic' is followed by references to the various intended responders...However the reference to DEC being advised (as well as the one to FESA) is immediately followed by the words '(turnout if required) [emphasis added]'...

The Special Inquiry found that the inclusion of the adjunct, 'if required', brings with it a degree of ambiguity about whether or not the response to bushfires in these zones is, in fact, automatic. The Special Inquiry heard this ambiguity manifests itself in:

DEC being advised of fires a considerable time after they have first been reported to FESA and/or being advised by FESA COMCEN that assistance is not required...[On 6 February] DEC did not respond [to the fire] on the basis of the initial advice from FESA COMCEN specifically because it was advised that a response was not required...DEC's response was [subsequently] mounted unilaterally on the basis of its own intelligence that the initial fire had escaped and was escalating rapidly²⁶³.

Given the potential for confusion arising from the wording of the Protocols, the Special Inquiry is of the view that they should be made more explicit to reflect the initial intent for automatic and rapid advice to, and response by, all responders. However as discussed elsewhere in this report, even in the absence of an explicit requirement to do so, FESA's reluctance to engage constructively and proactively with DEC in response to bushfires is of serious concern to the Special Inquiry.

The Manager of DEC's Fire Management Services Branch, Mr Murray Carter, expressed disappointment that the issues raised by FESA in its Submission to the Special Inquiry had not been:

. . . talked about or drawn attention at the Interagency Bushfire Management Committee level, I just find extremely disappointing and I just think that illustrates the difficulty at that level to do the business collaboratively²⁶⁴.

The decision by FESA's Chief Operations Officer to call Victorian resources without first discussing this with DEC (see Chapter 4), epitomises the passive communication between agencies. In his first appearance before the Special Inquiry Mr Hynes made an unsolicited and unnecessary statement in evidence about the

²⁶³ Follow-up information provided by the Department of Environment and Conservation, 25 May 2011

²⁶⁴ Carter, M – Hearing 4 May 2011

Coroner's criticism of DEC in the Boorabin Inquest²⁶⁵. The Special Inquiry considers this illustrative of FESA's attitude towards DEC and questions whether Mr Hynes' attitude impacted on his decision to not use DEC resources.

Just as concerning was Mr Cuneo's evidence about why FESA did not call in the DEC resources to the fire. It was a case of 'they did not offer so we did not ask'²⁶⁶. This statement was not supported by other evidence but it exhibits an appalling attitude by one agency towards another. The Special Inquiry heard in evidence from DEC that:

*DEC was not requested to send incident management staff to either the Red Hill or Roleystone incidents at any stage during the first shift of these fires. DEC's presence at the Roleystone Fire Station and at the Regional Operations Centre was in liaison roles and **was instigated by the DEC State Duty Officer** [emphasis added] to determine if DEC could assist further and to feed information back to DEC to allow strategic planning for immediate and future resource needs²⁶⁷.*

The Special Inquiry recognises the intent of establishing an Interagency Bushfire Management Committee to improve interagency cooperation, but in the circumstances has to question whether it has been successful.

It became apparent during the conduct of the Special Inquiry that the poor relationships between agencies is being propagated in the main from the executive levels of FESA. The above citations are just an example of what the Special Inquiry received either as evidence, in submissions or by way of individual meetings.

The Special Inquiry is firmly of the view that a major cultural shift needs to occur within FESA. That cultural shift needs to drive change towards a more collaborative and genuine partnership approach in particular with other WA agencies involved in the response to bushfires, including volunteers.

The veracity of some answers given by FESA witnesses to this Special Inquiry gives rise to serious concerns about the values of FESA as an organisation.

Less attention needs to be given to expressing how good FESA might be and more attention given to establishing long term positive relationships so that the virtues of the organisation will be automatically recognised by others. **The Special Inquiry is not convinced that Term of Reference 5 can be achieved without significant change to FESA and its management team.**

²⁶⁵ Hynes, C – Hearing 29 March 2011

²⁶⁶ Cuneo, L – Hearing 20 May 2011

²⁶⁷ Follow-up information provided by the Department of Environment and Conservation, 18 May 2011

Fire and Emergency Services Authority

The Special Inquiry heard consistent and wide-ranging criticisms of FESA's management as has been evidenced throughout this report.

While the Special Inquiry was not specifically tasked with reviewing FESA's operations, as noted in Chapter 1 the Special Inquiry considered that an examination of FESA was not only appropriate, but necessary, in order to fully address Terms of Reference 1, 4 and 5.

The Special Inquiry was particularly concerned that **the State's emergency management plans and policies were not followed by FESA in its role as a Hazard Management Agency**. WESTPLAN-BUSHFIRE was updated in December 2010 to reflect key learnings from the Victorian Royal Commission. As discussed in Chapter 4, FESA management did not comply with the amended plan despite leading its development.

Under the *Fire and Emergency Services Act 1988*, FESA was created as a statutory government authority, with the FESA Board established as the governing body. The Board is set up as a representative Board, with membership defined by section 6(1) of the Act. Members represent:

- the four consultative committees: Bush Fire Service Consultative Committee; Fire & Rescue Service Consultative Committee; State Emergency Service Consultative Committee; and Volunteer Marine Rescue Service Committee
- members and officers of private or volunteer fire brigades
- volunteer firefighters
- SES Units
- Volunteer Marine Rescue Service Groups
- Members of staff
- Local government.

The Chief Executive Officer is also a member of the Board.

Given its concerns with FESA's management, the Special Inquiry was particularly interested in whether the Board was actively overseeing FESA's operations, and whether the governance model itself was appropriate.

In doing this, the Special Inquiry considered a number of other reviews of corporate governance which specifically addressed the use of Boards in the public sector.

In 2008 the Queensland Government commissioned an independent review of its boards, committees and statutory authorities. The review²⁶⁸ recommended a Public Interest Map for Government Bodies to provide a transparent, principled and objective guide to inform consistent decision-making on the bodies being reviewed. The Public Interest Map included a threshold test and criteria to determine whether a body should be created or continued. The test is designed to address the question *'is there any compelling reason why a department cannot, or should not, undertake the proposed activity?'*

Based on its analysis of governance arrangements, the Queensland Government review concluded that private sector models of corporate governance are not necessarily superior to public sector governance models. It said that *'adoption of the board model of governance should not be presumed, but contested and justified'*²⁶⁹.

The Special Inquiry also considered the Australia Government's *Review of the Corporate Governance of Statutory Authorities and Office Holders* (the Uhrig Review)²⁷⁰. The review was commissioned by the Prime Minister to examine structures for good governance, including relationships between statutory authorities and the responsible Minister, the Parliament and the public, including business. The Uhrig review was critical of the use of representative boards, noting that:

*Such appointments are said to help the board ensure that it is well briefed on all interests in evaluating the strategies of management. However, an issue that was often raised is managing the conflicts of interests that arise for these directors. The review considers that while these types of appointments are appropriate for advisory boards, for governance boards they fail to produce independent, critical and objective thinking. Representational boards do not provide the best form of governance for an authority due to the potential for directors to be primarily concerned with the interests of those they represent, rather than the success of the entity they are responsible for governing'*²⁷¹.

The Uhrig review also noted:

*given the nature of the functions of many statutory authorities, boards have little opportunity to add value. Governments often delegate the administration of a narrow set of functions . . .*²⁷²

²⁶⁸ Webbe, S & Weller, P (2008) *A Public Interest Map: An Independent Review of Queensland Government Boards, Committees and Statutory Authorities* Queensland Government

²⁶⁹ Ibid., p.5

²⁷⁰ Uhrig, J (2003) *Review of the Corporate Governance of Statutory Authorities and Office Holders*, Commonwealth of Australia, Canberra

²⁷¹ Ibid., p.43

²⁷² Ibid., p.35

Having reviewed the Minutes of the FESA Board for the period April 2010 to March 2011 inclusive, the Special Inquiry could not see that the Board regularly directed action or took decisions. In most cases, the Board received presentations, reports and information from FESA management and noted this information. While Board members of Consultative Committees provided minutes of committee meetings, it was not clear that these translated into action or decisions by the Board.

The Special Inquiry heard evidence from the Chair of the Board that while Board members are given an induction by the Chair, they do not receive any formal training to assist them to fulfill their roles²⁷³.

The Chair also said that the Board had not seen FESA's Submission to the Special Inquiry, although the executive summary was presented to the Board and the Board provided comments²⁷⁴. According to the Minutes of the Board from its March 2011 meeting, the FESA CEO provided the Board with a copy of the executive summary of FESA's Submission to the Special Inquiry. The Board endorsed a recommendation to '*support the proposed structure of the FESA submission*'²⁷⁵ but it did not see the Submission in full. The CEO had previously told the Board that the Premier had announced an independent review, but the Board did not discuss how FESA should engage with the Special Inquiry or provide the CEO with any direction about making a Submission²⁷⁶.

The Special Inquiry was concerned that the FESA Board – as the governing body of FESA – was not more directly involved in developing the FESA Submission, and did not see or authorise the Submission itself.

This is important as the *Fire and Emergency Services Act 1998* establishes the Board as the governing body of the authority (s.6(2)). The legislation provides for the CEO to administer the *day to day operations* of the authority (s19(2)), subject to the control of the Board. The Special Inquiry does not believe that the Submission made by FESA forms part of the day to day operations of the authority. A special inquiry under *Public Sector Management Act 1994* is not a regular occurrence or an operational issue. Given the potential for the findings of the Special Inquiry to affect the future direction and role of FESA, including the way FESA relates and interrelates with its stakeholders (TOR5), the direction and substance of the FESA Submission should have been a matter for the Board to determine.

Overall, the Special Inquiry does not consider the FESA Board is providing effective strategic oversight and direction to FESA. Having considered the findings of the Queensland Government review and the Uhrig review discussed above, the Special

²⁷³ Skinner, A – Hearing 11 May 2011

²⁷⁴ Skinner, A – Hearing 11 May 2011

²⁷⁵ Minutes of the FESA Board – 28 March 2011

²⁷⁶ Minutes of the FESA Board – 28 February 2011

Inquiry was convinced that **a representative Board is not an appropriate governance model for FESA.**

The Special Inquiry could not identify any reason why the functions of the Board could not be provided through a normal department structure, with responsibility for strategic direction shifting to the Minister. The Special Inquiry understands that the inclusion of representatives of various groups was designed to give a voice to the range of stakeholders when FESA was formed. However the Special Inquiry considers that time has moved on and it does not believe that the Board model is the best or only way to capture the diversity of FESA's business or consult with stakeholders. In considering the Minutes of the Board meetings, the Special Inquiry noted that one of the consultative committees a Board member was meant to represent, did not meet regularly²⁷⁷. The Board itself does not meet during the month of December which is mid bushfire season.

The Special Inquiry believes **FESA's key stakeholders, including volunteers and industry groups, could be actively engaged through the establishment of an emergency services advisory group.** This advisory group should report directly to the Director-General. The group could consider issues referred to it by the Director-General and identified by individual advisory group members.

In considering FESA's governance arrangements, the Special Inquiry again looked in detail at the 2006 CDJSC report²⁷⁸. The CDJSC recommended consideration be given as to '*whether a review is warranted regarding FESA remaining as a statutory authority or re-structuring as a department*'²⁷⁹.

The CDJSC noted that both the Department of the Premier and Cabinet and the Department of the Treasury and Finance considered that amendment to the existing board structure does not necessarily require amendment to the current status of FESA as an Authority²⁸⁰. However the Special Inquiry is of the firm view that **the State's emergency management and fire and emergency service response needs to be directly accountable to Government and believes a departmental structure is the best way to achieve this. Under this arrangement, the Board would be abolished.**

The Special Inquiry notes that the United Firefighters Union (WA Branch) does not support FESA becoming a department²⁸¹. This relates in part to the Union's own concerns with FESA's management. The Union noted that other fire agencies across Australia operate as fire services run by commissioned officers, and not as

²⁷⁷ The Fire and Rescue Consultative Committee

²⁷⁸ CDJSC (2006), op.cit.

²⁷⁹ Ibid., Recommendation 60, p.173

²⁸⁰ Ibid., p.173

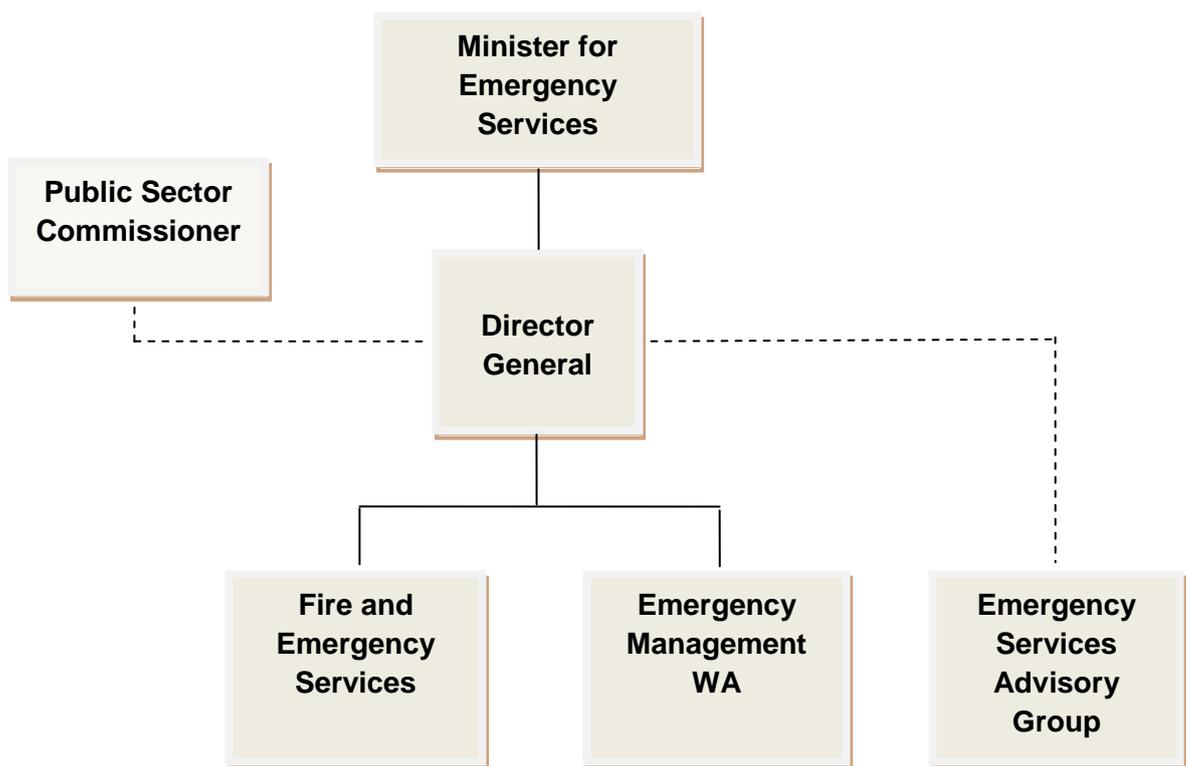
²⁸¹ Consultation with United Firefighters Union WA – 25 May 2011

departments. The Union raised concerns that FESA does not have a Commissioned Chief Officer, but rather a Chief Executive Officer without an operational background. The Special Inquiry considers this concern can be alleviated by having a commissioned officer overseeing the operational arm of the new Department, reporting to the Director-General.

As noted earlier, the Special Inquiry believes the emergency management policy and planning function undertaken by Emergency Management Western Australia (EMWA) should be separated from FESA’s operational functions. The purpose of this separation is to reposition EMWA to take a whole-of-government focus and to address the Special Inquiry’s concerns that FESA is itself not complying with current State emergency management policies and plans.

The proposed model is illustrated in Figure 2.

Figure 2: Proposed structure for new fire and emergency services department – Option 1

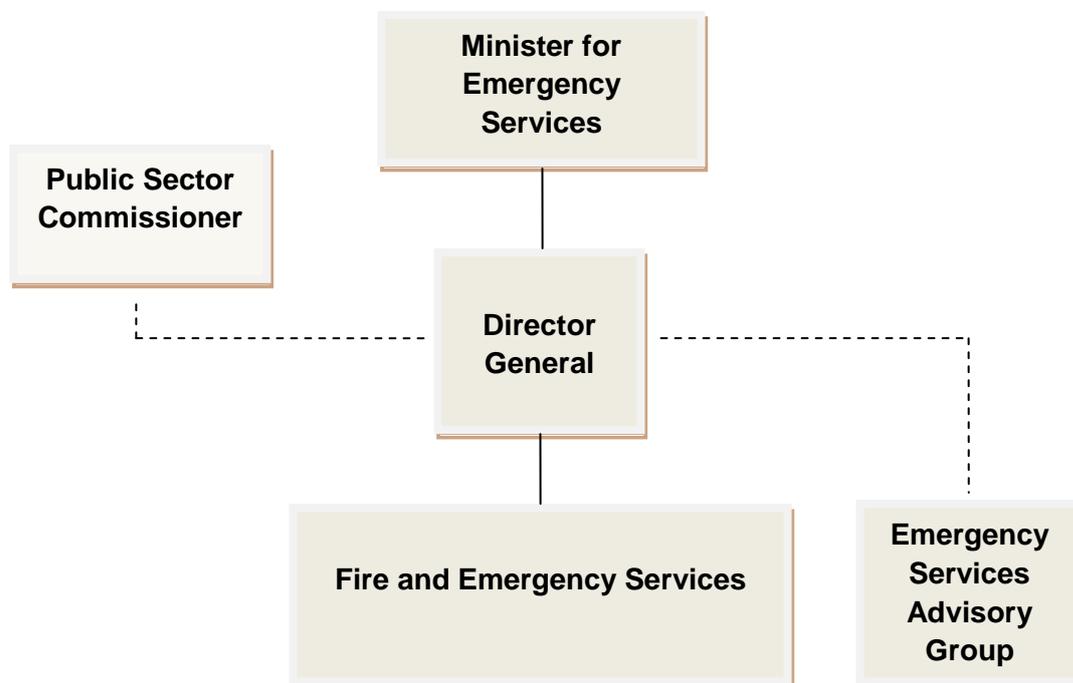


Alternatively, EMWA could be moved to either the Department of the Premier and Cabinet (Option 2), which has existing emergency coordination responsibilities, or

the Department of the Attorney-General (Option 3), which would be consistent with Australian Government functional arrangements²⁸².

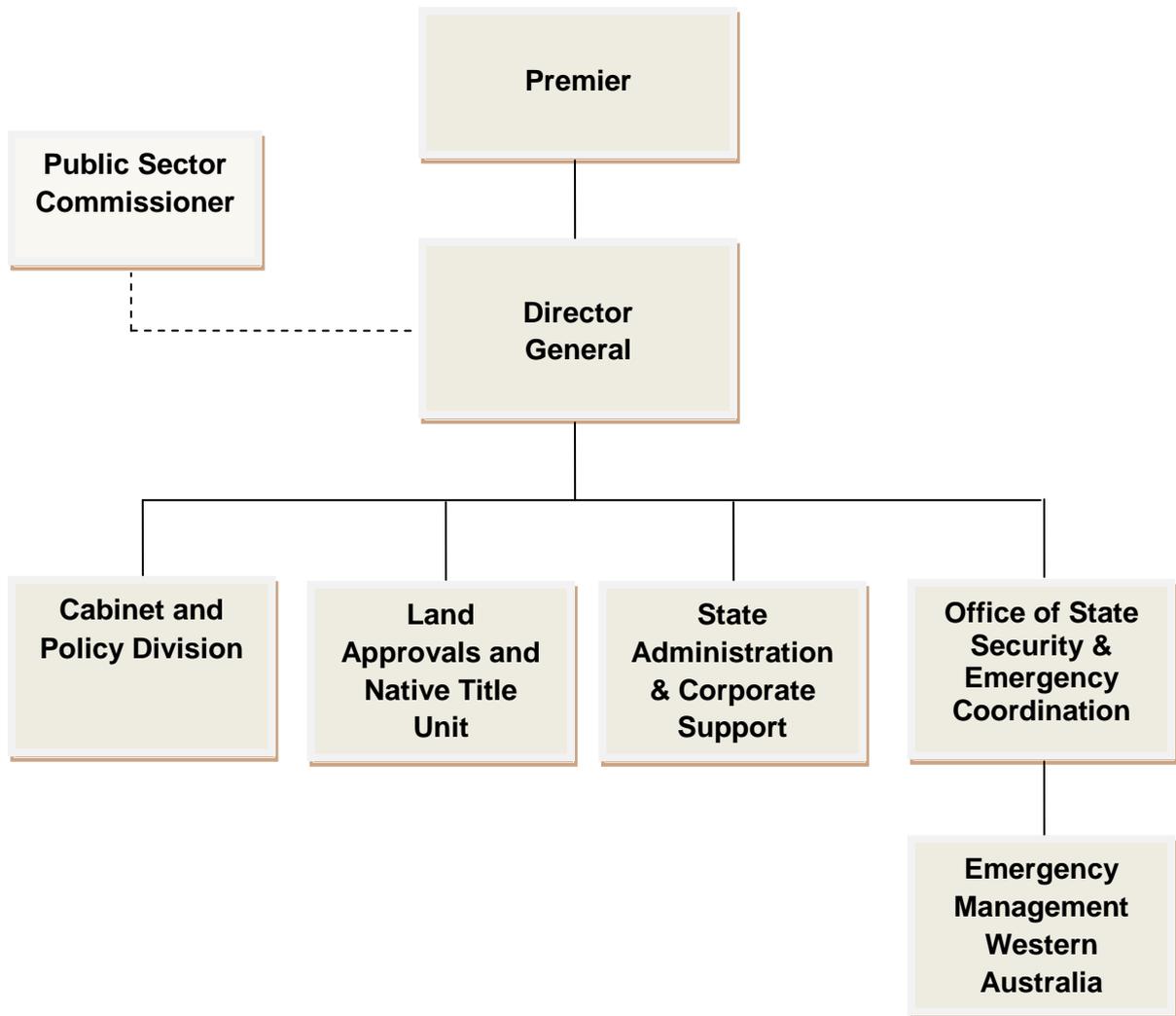
Locating EMWA in either of these departments would similarly ensure that it took a whole-of-government focus and that all relevant agencies were actively involved in the development of – for example – new emergency services legislation and revisions to emergency management plans and policies. These options are illustrated in Figure 3, Figure 4 and Figure 5.

Figure 3: Proposed structure for new fire and emergency services department – Options 2 and 3



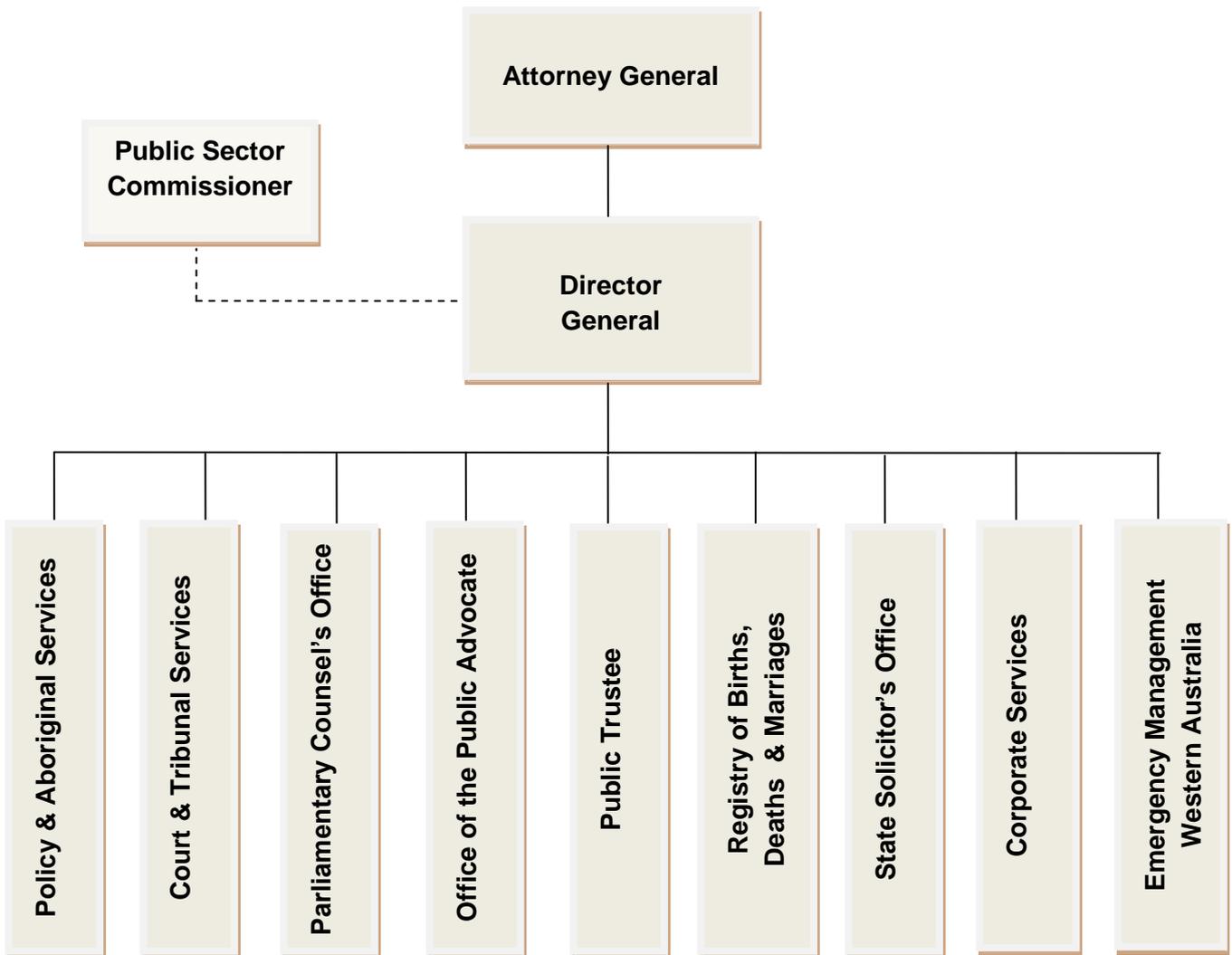
²⁸² Emergency Management Australia is located in the Australian Government Attorney-General's Department

Figure 4: Possible location of Emergency Management Western Australia – Department of the Premier and Cabinet - Option 2²⁸³



²⁸³ The Department of the Premier and Cabinet also comprises the State Law Publisher, Cabinet Secretariat and Constitutional Centre which are not represented in this diagram. It also has responsibility for Ministerial and overseas offices

Figure 5: Possible location of Emergency Management Western Australia – Department of the Attorney-General - Option 3



Recommendation 46

The State Government restructure the Fire and Emergency Services Authority as a Department.

As part of this restructure, Emergency Management Western Australia should either be:

- a) clearly separated from the fire and emergency services response function (see figure 2); or
- b) moved to the Department of the Premier and Cabinet (see figures 3 and 4) or
- c) moved to the Attorney-General's department (see figures 3 and 5).

The Special Inquiry was keen to understand the true cost to the community of the Roleystone-Kelmscott fire, and indeed any fire of such a magnitude.

When appearing before the Special Inquiry, the CEO of FESA explained that they were able to identify the cost of the fire in terms of housing damage and assistance provided through the Western Australia Natural Disaster Relief and Recovery Arrangements²⁸⁴. They are not, however, able to estimate the total cost to the community of a fire. Other costs such as power and water infrastructure are also not calculated and therefore considered. Similarly, the FESA Board has not considered this issue or indeed the price of a response to a fire²⁸⁵.

This issue was well put by Roleystone residents David and Terri-joy Mazzucchelli who wrote in their Submission:

*. . . there must also be an examination of the cost of this fire event. If the same amount of money had been allocated to effective land management, would it have cost less?*²⁸⁶

The impact on small business must also be recognised. The Armadale Region Business Association²⁸⁷ told the Special Inquiry that many businesses in the Roleystone area suffered from a dramatic reduction in trade in the aftermath of the fires, and in one case the business was so badly affected by a decline in revenue that wages could not be met.

The Special Inquiry considers it important that the Government and the community understand the true cost and impact of a fire to the community. Understanding this

²⁸⁴ Harrison-Ward, J – Hearing 29 March 2011

²⁸⁵ Skinner, A – Hearing 11 May 2011

²⁸⁶ Submission of David and Terri-joy Mazzucchelli

²⁸⁷ Submission of the Armadale Region Business Association Inc

cost would enable effective cost-benefit analysis of prevention and mitigation activities, including those described in Chapter 3, and the effectiveness of response to fires in WA.

Recommendation 47

Emergency Management Western Australia develop mechanisms to calculate the estimated total cost of a fire to the community.

Emergency Services Levy

The Emergency Services Levy (ESL) was introduced in Western Australia in 2003-4²⁸⁸ to replace nine systems for the funding of fire and emergency services. These systems were considered unfair and inequitable and included hidden costs. The new ESL system means all property owners contribute to the cost of emergency services fairly and equitably through the local government rates process. ESL funds are collected by local governments and provided to FESA to manage.

ESL funds provide the main source of funds for the operations of the following

- *Bush Fire Service (BFS);*
- *Career Fire and Rescue Service (CFRS);*
- *Emergency Management Services (EMS);*
- *State Emergency Service (SES);*
- *Volunteer Emergency Service Units (VES), previously known as FESA Units;*
- *Volunteer Fire and Rescue Service (VFRS); and*
- *Volunteer Fire Service Brigades (VFS)*²⁸⁹.

Local governments apply to FESA for capital and operating grant budgets. The process is managed by FESA and clearly set out in an annual Local Government Manual for Capital and Operating Grants.

²⁸⁸ Through Part 6A of the *Fire and Emergency Services Authority of Western Australia Act 1998*

²⁸⁹ *Fire and Emergency Services Authority Emergency Service Levy – Local Government Manual for Capital and Operating Grants 2011/12*

The Special Inquiry was told that FESA management offered new equipment – funded through the ESL – to local governments as an incentive to be part of the Community Emergency Services Manager program (discussed in Chapter 2 and below). Other witnesses told the Special Inquiry that FESA did not apply the ESL funding criteria consistently, declining claims for items which fell within the parameters of the guidelines and had previously been paid. While the Special Inquiry was not mandated to investigate or verify these claims, it was sufficiently convinced that a detailed review of the way ESL funds are allocated by FESA is warranted.

Regardless of the outcome of such a review, the Special Inquiry questions whether it is appropriate for an agency which is funded through the ESL to also be responsible for its distribution. The Special Inquiry sought legal advice which indicated while some legislative amendments may be necessary, there was no reason why the levy could not be collected and spent solely on fire and emergency services outside of FESA.

The ESL was also considered in the 2006 CDJSC Report²⁹⁰. The CDJSC did not support removal of the ESL from FESA, but did consider:

. . . it would be appropriate for the Auditor General to consider conducting an assessment of the effectiveness of the ESL, taking into consideration the impact of resource-to-risk assessment models employed in the distribution of the levy²⁹¹.

During that inquiry, local governments queried whether the ESL had resulted in an increase in the effectiveness of emergency services in the State. The CDJSC reviewed financial figures and data which showed that the ESL had resulted in improvements in emergency services throughout the State. It did however note that:

Local governments that provided a high level of support view that they are now disadvantaged given the ESL's focus on ensuring less equipped local governments are brought up to an appropriate standard²⁹².

In considering this issue, the CJDSC noted that it would take some time to ensure that a high standard of emergency service is achieved in every local government area, and considered that the disparity in the short term was inevitable.

²⁹⁰ CDJSC, op.cit.

²⁹¹ Ibid., p.10

²⁹² Ibid., p.9

Given that was some five years ago, and the issues with the administration of the levy raised with the Special Inquiry, the Special Inquiry considers a review of the distribution of the ESL is urgently needed.

As discussed in Chapter 3, the Special Inquiry was concerned about the significant variability in both the quality and quantity of prescribed burning and risk mitigation programs across the local governments of the Perth Hills. In saying this, the Special Inquiry acknowledges the significant resource constraints faced by local governments with respect to fuel load assessment and management.

The Bushfire Front Inc suggested part of the ESL could be used by Shires to employ crews to do this work:

The Emergency Services Levy (ESL) does not appear to be available for fuel reduction burning or hazard management. Large sums of money are collected under this levy each year, and could be allocated to Shires to employ fire crews²⁹³.

The Special Inquiry considered whether the ESL could be used to support local governments to undertake these burns. However the limitations of this approach were clearly set out by the CDJSC:

The Committee does not view expansion of the ESL to fund emergency services related costs external to the current ESL criteria as possible, to do so would increase rates and charges beyond the Consumer Price Index . . . the ESL was not intended to change the statutory obligations of local government in regard to the funding and management of a range of land management and community safety responsibilities under the Bush Fires Act 1954 and Local Government Act 1995, including the resources and infrastructure required to administer those responsibilities²⁹⁴.

. . . In effect this means that expenses incurred in relation to those functions remain the responsibility of local government²⁹⁵.

Recommendation 48

The State Government move the responsibility for the management and distribution of the Emergency Services Levy to the Department of Finance

²⁹³ Submission of the Bushfire Front Inc, p.7

²⁹⁴ CDJSC, op.cit., p.10

²⁹⁵ Ibid., p.191

Exercising

As noted in Chapter 2.4, section 1.7 of WESTPLAN-BUSHFIRE requires that the plan be exercised annually.

Mr Terry Maher, a Principal Fire Operations Officer from the Department of Environment and Conservation, told the Special Inquiry that:

We try and have a State exercise, joint exercise, once a year, but it's – it has occurred, but as to whether it's an effective exercise would be questionable. . . and it's a desktop exercise. There was one leading in to this summer and some of our staff participated in it, but it was, again, a desktop exercise²⁹⁶.

The Director-General of DEC noted that prescribed burns conducted by DEC provided its staff, including pre-formed teams, with knowledge and experience which could be considered a form of exercise. DEC noted that this can include collaboration with volunteer bush fire brigades.

FESA's Chief Operations Officer, Craig Hynes²⁹⁷ outlined to the Special Inquiry the exercise completed in the lead up to the 2010-11 fire season and indicated that both the DEC training officers and FESA training centres have developed exercising processes to use going into the next fire season.

The Special Inquiry understands Local Emergency Management Committees and District Emergency Management Committees also run exercises each year as required under State Emergency Management Policy 3.1 (SEMP 3.1) *Emergency Management Exercises*²⁹⁸.

SEMP 3.1 identifies three types of exercises²⁹⁹:

- Discussion (seminars, workshops, desktop)
- Functional (drill or games style)
- Field exercise or full deployment.

Under SEMP 3.1 emergency management agencies are required to submit detailed annual State and District level exercise schedules by 1 May each year, for discussion at the June State Emergency Management Committee meeting.

²⁹⁶ Maher, T – Hearing 9 March 2011

²⁹⁷ Hynes, C – Hearing 29 March 2011

²⁹⁸ State Emergency Management Committee (2009) *Emergency Management Exercises* State Emergency Management Policy 3.1

²⁹⁹ *Ibid.*, p.3

Despite this requirement, **the Special Inquiry was not convinced that there was a coordinated approach to exercising which included field exercises, involved all relevant agencies, adequately tested the arrangements in WESTPLAN-BUSHFIRE and the State emergency management policies** arrangements at both a State and local level, and effectively engaged volunteers and the community.

Recommendation 49

Emergency service agencies undertake more consultation and joint exercising involving the Fire and Emergency Services Authority, the Department of Environment, the Western Australian Police, the Department for Child Protection, local governments and volunteers – including Volunteer Bush Fire Brigades.

This should include field exercises which test:

- Evacuation centres
- Critical infrastructure (including at the local level)
- Traffic management, including road blocks.

Consideration should also be given to involving the community in exercising (see Recommendation 7) and using prescribed burns as exercises (see Recommendation 14).

More detailed planning for exercises should be included in a revised WESTPLAN-BUSHFIRE to be endorsed by the State Emergency Management Committee.

Fire Hydrants

There are 68,000 fire hydrants in Western Australia, with 61,000 hydrants owned by FESA and 7,000 owned by approximately 100 local governments³⁰⁰. Ownership of hydrants is defined under the *Fire Brigades Act 1942*.

Responsibility for servicing and maintenance of the hydrants is split between FESA, local government and the Water Corporation. FESA and local governments as owners of the hydrants are responsible for servicing the hydrants and in FESA's case this is done by firefighters conducting annual checks³⁰¹. FESA contracts the Water Corporation to carry out repairs they have detected through their inspections³⁰².

³⁰⁰ FESA Hearing – 29 March 2011 and 9 May 2011

³⁰¹ Lamont, D – Hearing 9 May 2011

³⁰² Submission of the Water Corporation

The 2006 CDJSC *Inquiry into the Fire and Emergency Services Legislation*³⁰³ found that the ownership and management arrangements for fire hydrants in WA were unnecessarily complex and inappropriate. It recommended the responsibility for the installation, removal, maintenance (and all associated costs therein) of fire hydrants should rest with the water supply authority responsible for servicing the areas in which the hydrants reside. It also recommended that FESA and local government should retain their responsibilities in relation to the marking and servicing of fire hydrants in their respective areas.

The Special Inquiry found that the complexities of fire hydrant ownership, maintenance and repairs remained unresolved. FESA told the Special Inquiry that it had tried to transfer ownership of the fire hydrants to WA water providers but that this had been unsuccessful³⁰⁴. FESA also raised concerns about a backlog in completing repairs to hydrants which it had identified.

The Water Corporation told the Special Inquiry that analysis of work orders on hydrant maintenance indicated that there are currently about 1,000 outstanding work orders³⁰⁵. Based on its current completion rate of 150 hydrant maintenance jobs per month, the Water Corporation estimates it would take around 12 months to complete the backlog.

The Special Inquiry recognises that the State's water supply network represents critical infrastructure which must be protected. There is a tension between the need to restrict access in the current security environment and the need to ensure repairs and maintenance of fire hydrants are completed promptly. While firefighters – both employed by FESA and volunteers – depend on access to fully operational fire hydrants, security concerns mean it would not be appropriate for FESA or local governments to directly contract or undertake repairs to hydrants. However the Special Inquiry does not consider the current arrangements, where FESA and local governments pay the Water Corporation to undertake repairs on their behalf, are efficient or effective.

These current arrangements include very costly overheads and double-handling by agencies. The Water Corporation (as a Government Trading Enterprise) charges FESA and local government a 17 per cent management fee to undertake repairs on its behalf. FESA has indicated that it has paid approximately \$400,000 in management fees in the last two years³⁰⁶.

³⁰³ CDJSC, op.cit.

³⁰⁴ Submission of the Fire and Emergency Services Authority, p.245; and in a hearing on 29 March 2011

³⁰⁵ Submission of the Water Corporation, p., 4

³⁰⁶ Submission of the Fire and Emergency Services Authority, p.245

The Special Inquiry also heard³⁰⁷ examples of duplicate or multiple invoices being issued by the Water Corporation for the same job, with these invoices subsequently paid by FESA. Of particular concern was the description of an invoice for \$175,000 issued in error but subsequently paid.

The Special Inquiry believes that these sorts of anomalies arise out of the inefficient arrangement that is currently in place.

Recommendation 50

The State Government transfer responsibility for the installation, removal, maintenance of fire hydrants to the Water Corporation, in accordance with the recommendations of the 2006 CDJSC *Inquiry into Fire and Emergency Services Legislation*.

Recommendation 51

The Water Corporation immediately review the outstanding orders for hydrant repairs and develop strategies to reduce the backlog.

Local Government Coordination

As discussed in Chapters 2 and 3, local government has specific bushfire management and fire suppression responsibilities under the *Bush Fires Act 1954* and *Local Government Act 1995*. Local governments are also responsible for monitoring fuel loads on private properties, including inspection and enforcement regimes.

Local governments generally manage these responsibilities through their Chief Bushfire Control Officers. Some local governments participate in FESA's Community Emergency Services Manager (CESM) Program (described in Chapter 2), with these staff working as, or working with, Chief Bushfire Control Officers and taking on many of these duties.

The Special Inquiry heard conflicting reports of the success of the CESM Program and the way in which it was administered by FESA.

FESA presented the program³⁰⁸ as a tangible success in its collaborative work with and in support of local government, Bush Fire Control Officers, and Bush Fire

³⁰⁷ Follow up discussion with David Lamont, Manager – Water Policy and Strategy, FESA, following a hearing on 9 May 2011

³⁰⁸ Submission of the Fire and Emergency Services Authority, and in a hearing on 29 March 2011

Brigades. FESA said the program was increasing in momentum and provided a key on-the-ground resource to support Bush Fire Brigade administration, maintenance and enhancement of local capacity, capability and stakeholder management. FESA said that the program was very successful and had been positively received by all parties involved.

As noted in Chapter 2.3, the Special Inquiry heard from the Shire of Mundaring about its participation in the program. In evidence before the Special Inquiry on 6 May 2011, the Shire CEO described a good working relationship with FESA and considered the arrangement had worked in favour of the community. The program was also supported by the Association of Volunteer Bush Fire Brigades of WA and Emergency Services Volunteers Association³⁰⁹ and the Western Australian Local Government Association (WALGA). Mr John Lane, Emergency Management Coordinator of WALGA, while noting the potential for misunderstanding about the role, considered the program was working well:

Most of the community emergency services officers have a fire background and so they bring that fire background, and I probably would suggest that fire risk is the most important part of their role because that's – if you have a look at the position description, it generally goes to fire; it doesn't look at the other side of emergency management. So I think there may be a little bit of misunderstanding as to what the actual role is. So the program is actually working quite well, so I believe. I haven't had any comments to the contrary from local governments so I would suggest that it's a good process and it's working well³¹⁰.

In contrast, the Special Inquiry heard evidence that some local governments³¹¹ had withdrawn from the CESM Program, preferring instead to have their own Chief Bush Fire Control Officer.

The Special Inquiry was also told that FESA was 'offering deals' to get shires to sign up to the program. It was put to the Special Inquiry that FESA was attempting to use the program to take control of bushfire management in local governments and 'bully' volunteers, while being able to report that it engaged local government. It is regrettable that people making these comments feared retribution from FESA for raising their concerns with the Special Inquiry, asking not to be identified. While the Special Inquiry was very concerned about these claims, it was not within the Special Inquiry's Terms of Reference to examine this in detail.

³⁰⁹ Submission of the Association of Volunteer Bush Fire Brigades of WA and Emergency Services Volunteers Association, p.1

³¹⁰ Lane, J – Hearing 14 April 2011

³¹¹ City of Gosnells; City of Rockingham

The Special Inquiry recognises the benefit for local governments of having experienced and well-trained officers serving as the Chief Bushfire Control Officer, and believes these officers should have strong links to other fire agencies, including FESA and DEC. However, if the concerns raised with the Special Inquiry are true, FESA's management of the CESH program could undermine its effectiveness.

As noted in Chapter 3, the Special Inquiry recommends FESA and local governments ensure the ability to measure and map fuel loads, maintain fuel load databases and prepare for, and oversee, controlled burns are included as key competencies in any future recruitment of Chief Bushfire Control Officers and Community Emergency Services Managers. FESA and local government should also examine the current competencies of staff in these positions and consider what development is needed to ensure these critical tasks are undertaken for each local government area.

The Special Inquiry understands that Community Emergency Service Managers, whilst reporting to both FESA and local government, are based in FESA offices. The Special Inquiry considers that, to be effective, the staff fulfilling this role should be based locally, regardless of whether the work is done through a FESA program or by a local government Chief Bush Fire Control Officer.

Recommendation 52

The Fire and Emergency Services Authority and local governments ensure that Community Emergency Service Managers are physically based in local government.

Recommendation 53

The Fire and Emergency Services Authority and local governments examine the current competencies of Chief Bushfire Control Officers and Community Emergency Services Managers (or Community Fire Managers) and consider what further development is needed to ensure these staff are capable of:

- measuring and mapping fuel loads
- maintaining fuel load databases
- drawing up prescriptions for, and overseeing, controlled burns
- building effective working relationships with all relevant stakeholders.

Community Resilience

As discussed in Chapters 1 and 2, the Special Inquiry considered the *National Strategy for Disaster Resilience*³¹². The Special Inquiry strongly supports its comments that:

*Application of a resilience-based approach is not solely the domain of emergency management agencies; rather, it is a shared responsibility between governments, communities, businesses and individuals*³¹³.

The Strategy also notes:

If individuals and communities understand the impacts of their behaviours on themselves as well as their families, their communities and the environment, this can help to improve their capacity to make informed decisions based on assessed risks . . .

*. . . The cost to individuals or to businesses might be in the form of time, energy or other resources. However, in the medium to long-term, the benefits of improved disaster resilience will exceed the costs*³¹⁴.

The Special Inquiry strongly encourages community members to consider this report and the recommendations contained within it. In particular residents should:

- actively engage in community education processes and make use of the information made available by FESA and local governments (refer Recommendation 6, 7, 8 and 9)
- reduce fuel loads on their properties and install appropriate fire breaks and understand that they **will** face penalties if these requirements are not met (Recommendation 17 and Recommendation 18)
- take advantage of opportunities to be involved in exercising (refer Recommendation 7)
- consider what changes can be made to their properties to comply with AS3959-2009 (Recommendation 39). While the application of AS3959-2009 is not retrospective, there are steps property owners can take to reduce the level of risk – for example fitting screens to evaporative air conditioners.

³¹² NEMC, op.cit.

³¹³ Ibid., p.ii

³¹⁴ Ibid., p.15

While the Special Inquiry appreciates residents' concerns about the additional costs imposed by building to the Australian Standard, or retrofitting homes to meet the Australian Standard, this needs to be considered in the context of the cost – both financial and emotional – of losing a property during a bushfire.

The Special Inquiry had the opportunity to visit the Perth Hills on many occasions, and could easily see the beauty and the appeal of the area. However it firmly believes that **residents must recognise that living in a bush location comes with a risk – and that they themselves must do all that they can to reduce that risk.**

6.4 STRUCTURED REVIEWS

The Special Inquiry identified a number of areas where urgent action is needed to ensure the Perth Hills is prepared for future bushfire seasons. However it does not believe that this Inquiry and the recommendations it makes should be the end. The Special Inquiry identified significant shortcomings in the way the incident was managed and in particular a failure to comply with State emergency management plans and policies. A structured review process is critical to assess incident management after every major incident, and to ensure that these deficiencies are addressed operationally.

Critical reviews rather than peer reviews are considered more productive. Any organisation can make mistakes but an organisation that is defensive about reviews and covers up its mistakes is destined for a disaster.

Incident Controllers

The Interagency Bushfire Management Committee (IBMC) has considered the findings of the Victorian Bushfires Royal Commissioner, including in relation to the training, development and competencies of incident controllers.

The Victorian Bushfires Royal Commission³¹⁵ recommended:

- agencies prescribe and audit the minimum number and nature of level 3 joint training exercises in which incident management team staff are required to participate (Recommendation 9)
- regular training for incident management team staff, highlighting the importance of information and reinforcing the support available from specialists within the State Control Centre (Recommendation 15)
- a uniform, objective and transparent process for the accreditation of level 3 incident Controllers (Recommendation 17)

³¹⁵ 2009 Victorian Bushfires Royal Commission (2010), *The 2009 Victorian Bushfires Royal Commission – Final Report*

- a performance review system for level 3 Incident Controllers (Recommendation 17)
- a traineeship program for progression from level 2 to level 3 incident management team positions (Recommendation 17)

The Special Inquiry understands the IBMC is working to develop a State-wide accreditation system for Level 3 Incident Controllers, however, at this point in time FESA and DEC separately train their staff. The Chief Operations Officer of FESA, also told the Special Inquiry that the IBMC had a dedicated project team to identify any shortcomings in incident management structures, pre-formed teams, common incident reporting and common forms³¹⁶.

However, the Special Inquiry heard evidence that performance reviews of incident controllers following major events were not undertaken consistently or, in the case of the Roleystone-Kelmscott fire, done at all.

The Special Inquiry questioned FESA's Chief Operations Officer, Mr Craig Hynes, about the review of Superintendent Gary Kennedy, the incident controller for the Roleystone-Kelmscott fire. Mr Hynes said:

*We did that on an informal basis, that's for sure. The MIR would be a function of looking at the performance of the incident management of the incident*³¹⁷.

The Special Inquiry does not consider that this issue was sufficiently addressed in the draft MIR.

Mr Hynes went on to say:

*I looked on the web browser, and it did say that we should activate our assessment teams for this incident and, in fact, Gary Kennedy is one of those assessors. So it wasn't done*³¹⁸.

The Special Inquiry does not consider Superintendent Kennedy's status as an assessor sufficient excuse to not have another party formally review his performance. In saying this, the Special Inquiry offers no judgment on Mr Kennedy's performance, other than the matters raised elsewhere in this report.

³¹⁶ Hynes, C – Hearing 29 March 2011

³¹⁷ Hynes, C – Hearing 10 May 2011

³¹⁸ Ibid.

Recommendation 54

The Interagency Bushfire Management Committee develop a consistent program of education, training (including media), testing and review of Level 3 Incident Controllers.

This should include provision for a formal review of the performance of individual Level 3 Incident Controllers after **every** incident.

Major Incident Reviews

As discussed in Chapter 1, the Special Inquiry had significant concerns about the Major Incident Review undertaken for FESA following the three fires in early 2011 (Lake Clifton, Red Hill and Roleystone-Kelmscott). The Special Inquiry considers that Major Incident Reviews should:

- be conducted independently of responding agencies
- consult the full range of responding agencies – including Volunteer Bush Fire Brigades
- be presented to the commissioning agency as a complete report that cannot be changed
- be completed within six weeks of the incident.

For a Major Incident Review to be effective, it must provide a complete picture of the management of an incident and include consultation with the full range of responding agencies. As noted previously, the Special Inquiry was disappointed that the Volunteer Bushfire Brigades were not consulted in the Major Incident Review of the three fires in January and February 2011.

It also needs to be timely, to give agencies time to respond to the recommendations and make changes or improvements to identified weaknesses or shortcomings. Again, the Special Inquiry was concerned that the Major Incident Review had not been completed some four months after the fire.

The Special Inquiry was disappointed that the draft Major Incident Review failed to identify and address a number of areas of concern which were subsequently addressed in this report. We cannot expect there will be a Special Inquiry after every major incident, and as such it is critical that Major Incident Reviews provide a thorough and objective assessment of the management of incidents.

6.5 IMPLEMENTATION / THE WAY FORWARD

As outlined in Chapter 2, there is a long history of reviews and inquiries into bushfire risk management in Western Australia. Many of the issues raised in this Special Inquiry are not new and have been the subject of recommendations of previous reviews.

The challenge is ensuring that the findings of the Special Inquiry translate into action that makes a real difference to the safety of people living in the Perth Hills, and potentially the broader State.

The Special Inquiry felt a responsibility to the community, and in particular to the witnesses who came forward, to present an honest and frank assessment against the Terms of Reference. This includes reporting on its findings about the relationships between government agencies, and concerns about FESA's management and culture in executing its fire responsibilities.

Recommendation 55

The State Government review implementation of the Special Inquiry's recommendations in two years.

ANNEXURE 1 – ANNOUNCEMENT OF THE SPECIAL INQUIRY



Government of **Western Australia**
Department of the **Premier and Cabinet**

Premier; Minister for Emergency Services

23/2/11

Joint Media Statement

Terms set for Perth Hills Bushfire review

An independent review of bushfire risk management in the Perth Hills area will include public hearings and submissions and require the co-operation of all Government agencies and officers with assistance from local governments.

Premier Colin Barnett said the work undertaken would be in addition to a review under way by the Fire and Emergency Services Authority (FESA).

“The bushfires in Perth’s Hills over the weekend of February 5 and 6 destroyed 71 homes with a further 39 homes and other structures damaged,” the Premier said.

“FESA conduct a review after every major fire which is currently under way however the State Government believes there are important lessons to be learned in terms of prescribed burning and building code matters specific to the Perth Hills area.”

Mr Barnett has appointed Mr Mick Keelty APM to chair the review.

“Mick Keelty was the Australian Federal Police (AFP) Commissioner for eight years from 2001-2009 and oversaw the expansion of the AFP following the terrorist attacks in the United States of America and played a crucial role in disaster assessment and emergency response at the time of the Bali bombings,” he said.

“Mr Keelty will bring his highly developed analytical skill and experience with policy development, security deployment, policing and peacekeeping to this role.”

The review will seek to address all aspects of bushfire risk management in the Perth Hills area with specific reference to:

- the adequacy of current preventative measures specifically prescribed burning and other bushfire mitigation activities
- the impact of land use, environmental and building laws, practices and policies in the affected areas, affecting bushfire prevention, mitigation and response and what, if any, any changes may be required

- the actions that can and should be taken by landowners, residents and tenants in relation to bushfire risk management including undertaking vegetation clearance, operation of evaporative air-conditioners and storage and/or removal of hazardous inflammable material surrounding their dwellings and buildings. This should include consideration of associated enforcement regimes and penalties
- the adequacy and effectiveness of information and communication campaigns and mechanisms, including systems for alerting residents in relation to the fire or potential fires
- improvements that can be made in relation to the co-ordination of activities across all levels of government, including with volunteer groups

A report will be drafted within four months and submitted to the Premier for consideration before it is tabled in State Parliament and publicly released.

All Government agencies and officers of agencies will be required to fully and openly co-operate with the review and to provide and access to all information, documentation or other records as requested by the reviewer. Local government agencies will be expected to cooperate in the same terms.

The Department of the Premier and Cabinet (DPC) will provide Mr Keelty with executive support and Mr Robert Cock QC will be available for legal advice.

Emergency Services Minister Rob Johnson said WA's emergency services had performed extremely well during what had been one of the most devastating and destructive bushfire seasons in the State's history.

"The Perth Hills bushfire was the ultimate test for our firefighting crews and required an incredible response from hundreds of operational staff, career and volunteer firefighters," Mr Johnson said.

"The Liberal-National Government is committed to continually improving the State's preparedness for these major incidents and will welcome any input into whether anything can be done to mitigate the possibility of destructive bushfires in the future."

Written submissions from interested individuals and organisations preferably in electronic form submitted or sent by email to PerthFireReview@dpc.wa.gov.au

The email must include full postal address and contact details. Written submissions may also be sent to:

Perth Hills Bushfire February 2011 Review
197 St Georges Terrace
PERTH WA 6000

Submissions should be received by April 15, 2011.

To ensure this process is as transparent as possible, submissions may be published, therefore anyone wishing to make a confidential submission must make this clear.

**ANNEXURE 2 –
APPOINTMENT TO CARRY OUT SPECIAL INQUIRY**

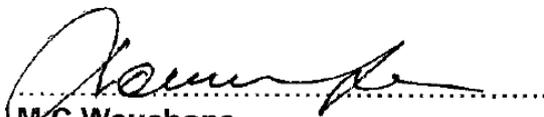
**APPOINTMENT TO CARRY OUT SPECIAL INQUIRY
made under s24H(5)(b) Public Sector Management Act 1994**

Mr Michael Joseph Keelty APM

I, MALCOLM CHARLES WAUCHOPE, Public Sector Commissioner, having been directed by Hon Colin Barnett MLA, Premier and Minister responsible for administration of the Public Sector Management Act 1994 to arrange for the holding of a special inquiry pursuant to s24H(2) of that Act into all aspects of bushfire risk management in the Perth hills area, being a matter related to the public sector, HEREBY APPOINT Michael Joseph Keelty APM, to carry out the special inquiry.

And I further require that you shall, on or before 23 June 2011, prepare a report on the conduct and findings, and any recommendations, of the special inquiry and provide me with a copy of that report.

Dated this 23rd day of February 2011


M C Wauchope

ANNEXURE 3 – TERMS OF REFERENCE

The Government has announced a review of bushfire risk management in the Perth Hills. To this end an independent inquiry pursuant to 24H of the *Public Sector Management Act 1994* will be held. The inquiry will have regard to all aspects of bushfire risk management in the Perth hills area with specific reference to:

1. The adequacy of current preventative measures, specifically prescribed burning and other bushfire mitigation activities.
2. The impact of land use, environmental and building laws, practices and policies in the affected areas, affecting bushfire prevention, mitigation and response and what, if any, changes may be required.
3. The actions that can and should be taken by landowners, residents and tenants in relation to bushfire risk management including undertaking vegetation clearance, operation of evaporative air-conditioners and storage and/or removal of hazardous inflammable material surrounding their dwellings and buildings. This should include consideration of associated enforcement regimes and penalties.
4. The adequacy and effectiveness of information and communication campaigns and mechanisms, including systems for alerting residents in relation to the fire or potential fires.
5. Improvements that can be made in relation to the coordination of activities across all levels of government, including with volunteer groups.

Mr Mick Keelty APM has been appointed to conduct the inquiry and will be provided with administrative support by the Department of the Premier and Cabinet.

Submissions and Queries

Submissions by the public are welcomed and the closing date for submissions is 15 April 2011. Guidance material and submission templates are available by contacting the review using the details below.

Electronic submissions as an attached Adobe PDF or MS Word format document are preferred and may be made electronically to PerthFireReview@dpc.wa.gov.au

Written submissions may also be sent to:

Perth Hills Bushfire February 2011 Review
Locked Bag 10 Cloisters Square
PERTH WA 6850

All submissions, electronic and otherwise should include full postal address and contact details.

Any queries regarding the inquiry should be directed to PerthFireReview@dpc.wa.gov.au or 9489 3104.

If you wish to make a confidential submission, you must make this clear at the time you make your submission.

However, people making submissions should be aware that the submissions may be released in accordance with the *Freedom of Information Act 1992*.

ANNEXURE 4 – LIST OF SUBMISSIONS

1. Jackie Ashford
2. The Bushfire Front Inc
3. Ian Heazle
4. Stephen Thornton
5. B D Barker
6. A A Lewis
7. Murray Kornweibel
8. Confidential Submission
9. Glenn Tunstead
10. Peter Sportel
11. Monika Reif
12. Paul Claune
13. Brigadoon Progress Association
14. David Redpath
15. Geoff Burrell
16. Michael Rutledge
17. Brian Gordon
18. Phillip Lewis
19. Michelle Samson
20. Anne Johnstone

21. Confidential Submission
22. Ron Iannello
23. Rob Phillips
24. Robert Marlborough
25. David Ward
26. Peta Townsing
27. Wilfred Luff
28. Lynn Shaw
29. William Jones
30. Rich Maslen
31. C Douglas
32. Timothy Mills
33. Ed and Leonie Donnes
34. Hannah Raynor
35. Louis M Flacks
36. Myra Cornwell
37. Frances Barrett
38. Gillian Lamont
39. Valerie and John Bell
40. Douglas James Brenkley
41. Margaret Armstrong
42. Malcolm McCallum

43. A & B Stewart
44. Confidential Submission
45. Banjup Residents Group
46. Association of Volunteer Bush Fire Brigades of WA and Emergency Services
Volunteers Association
47. Steve Marshall
48. M Sparkman
49. Anne Gordon
50. Colin James
51. Mel Thomas
52. Tom Heath
53. Mike Smith
54. Dianne Bateman
55. Sean Groombridge
56. Stephen Robson
57. Krysta Barwick
58. David and Terri-joy Mazzuccheli
59. Bob Tizard
60. Brendan B Privilege
61. Friends of the Ellis Brook Valley
62. Confidential Submission
63. Steve Dobson
64. Fire for Life

65. Anthony and Vicki Piertopiccolo
66. Trish Bensley
67. Paul Matthews
68. John Guest
69. Confidential Submission
70. Anglican Church – Parish of Armadale
71. Armadale Region Business Association Inc.
72. Laurie Biggs
73. Fire and Emergency Services Authority of WA (FESA)
74. Western Australian Federation of Farmers (WAFarmers)
75. SGIO
76. Landgate
77. Max Margetts
78. Confidential Submission
79. Bushfire Safety Consulting
80. Brad Brown
81. Suncorp
82. Alan and Victoria Cousins
83. Bruce Waddell
84. Caroline Wielinga
85. Hon Alison Xamon MLC
86. Confidential Submission

87. Shire of Mundaring
88. Australian Broadcasting Corporation
89. Water Corporation
90. Dr Tony Buti MLA
91. City of Armadale
92. Western Australia Police
93. Jan Pittman
94. Susan Bolsenbroek
95. Department of Environment and Conservation
96. Elizabeth J Wearing-Smith
97. Barrie J Hall
98. June Long
99. Department of Regional Development and Lands
100. Araluen Estate Progress Association
101. Confidential Submission

ANNEXURE 5 – LIST OF HEARINGS

9 March 2011	<p>Department of Environment and Conservation</p> <p>Mr K. McNamara, Director-General Mr P. Dans, Director, Regional Services Mr T. Maher, Principal Fire Operations Officer Mr K. Low, Senior Policy Officer Ms R. Evans, Senior Project Officer, Regional Parks</p>
14 March 2011	<p>Department of Planning</p> <p>Mr E. Lumsden, Director General Ms S. Cosstick, Acting Planning Manager</p>
14 March 2011	<p>Western Australian Police</p> <p>Mr K. O’Callaghan, Police Commissioner Mr M. Ryan, Strategic Policy Adviser Mr N. Stanbury, Director Of Public Relations</p>
15 March 2011	<p>City of Armadale</p> <p>Mr R. Tame, Chief Executive Officer Ms Y. Coyne, Executive Director, Community Services (Recovery Coordinator) Mr I. Macrae, Executive Director, Development Services Mr B. Watkins, Manager Ranger & Emergency Services & Chief Bushfire Control Officer Mr P. Lanternier, Manager, Parks</p>
16 March 2011	<p>Bureau of Meteorology</p> <p>Mr M. Bergin, Regional Director, WA Mr G. Reader, Manager Weather Services Mr B. Santos, Service Weather Meteorologist</p>
28 March 2011	<p>Swan River Trust</p> <p>Mr R. Hughes, General Manager</p>

29 March 2011	<p>Fire And Emergency Services Authority</p> <p>Ms J. Harrison-Ward, Chief Executive Officer Mr J. Butcher, Executive Director Emergency Management Mr C. Hynes, Chief Operations Officer Mr D. Caporn, Executive Director Community Development Mr M. Austic, Manager Of Bushfire And Local Government Relations</p>
11 April 2011	<p>Western Australian Police</p> <p>Mr J. Bouwman, Senior Sergeant - Armadale Police Station Mr B. Sorrell, Inspector - South East Metropolitan District Mr D. Gaunt, Superintendent - South East Metropolitan District</p>
12 April 2011	<p>Water Corporation</p> <p>Ms S. Murphy, Chief Executive Officer, Water Corporation Mr G. Sneddon, Acting Regional Business Manager, Perth Region Mr R. Pascoe. Manager, Strategic Asset Management Mr S. Mccarthy, Security Program Manager, Water Corporation</p>
12 April 2011	<p>Main Roads Western Australia</p> <p>Mr. Maurice Cammack, Manager, Road Safety</p>
13 April 2011	<p>Landgate</p> <p>Mr M. Bradford, Chief Executive Officer Mr M. Ducksbury, Manager of Data Integration And Quality Mr M. Adams, Manager of Satellite Remote Sensing Services Mr D. Sheperd, Program Coordinator for the Location Information Strategy</p>
14 April 2011	<p>Department of Education</p> <p>Mr D. Axworthy, Deputy Director General Schools Ms P. Taylor, Principal Consultant Mr J. Marrapodi, Head of Security</p>

14 April 2011	<p>Western Australian Local Government Association</p> <p>Mr W. Scheggia, A/Chief Executive Officer Mr J. Lane, Emergency Management Coordinator</p>
18 April 2011	<p>Australian Broadcasting Corporation</p> <p>Ms D. Leavitt – Local Content Manager of WA Mr J. Duhs, ABC Legal Mr T. Rasmussen, Local Radio</p>
18 April 2011	<p>Dr Tony Buti, MLA</p>
19 April 2011	<p>Western Australian Police</p> <p>Mr P. Zanetti, Commander</p>
19 April 2011	<p>The Bushfire Front Inc</p> <p>Mr R. Underwood, Chairman Dr F. Mckinnell</p>
3 May 2011	<p>Department for Child Protection</p> <p>Mr T. Murphy, Director General Mr K. Dean, Manager, Emergency Services Mr D. Harrison, State Welfare Emergency Coordinator</p>
4 May 2011	<p>Western Power</p> <p>Mr D. Aberle, Managing Director Mr K. Brown, General Manager, System Management Mr O. Casey, Manager, Metropolitan Operations</p>
4 May 2011	<p>Department of Environment and Conservation</p> <p>Mr K. McNamara, Director General Mr M Carter, Manger, Fire Management Services Branch Dr L. McCaw</p>

5 May 2011	<p>Department of Commerce</p> <p>Mr B. Bradley, Director General Mr P. Gow, Executive Director, Building Commission Mr K. Bowron, Executive Director, Energy Safety</p>
5 May 2011	<p>Association of Volunteer Bush Fire Brigades of WA and Emergency Services Volunteers Association</p> <p>Mr T. Hunter, President, Association Of Volunteer Bush Fire Brigades Of WA Mr J. Iffla, President, Emergency Services Volunteers Association Ms A. Gray, Executive Officer</p>
6 May 2011	Mr D. Redpath , Resident – Kelmscott
6 May 2011	Mr S. Marshall , Resident – Clifton Hills
6 May 2011	Mr G. Burrell , Resident – Kelmscott
6 May 2011	<p>Bedfordale Volunteer Bush Fire Brigade</p> <p>Mr G. Fancote, Fire Control Officer</p>
6 May 2011	<p>Shire of Mundaring</p> <p>Mr J. Throssell, Chief Executive Officer Mr M. Luzi, Director, Statutory Services Mr A. Dyson, Manager, Health And Community Safety Mr C. Garrett, Chief Bushfire Controller</p>
6 May 2011	Mr and Mrs E. and L. Donnes , Residents – Kelmscott
6 May 2011	Mr and Mrs G. and M. Jenkins , Residents – Roleystone
9 May 2011	<p>Fire and Emergency Services Authority</p> <p>Mr G. Kennedy, Superintendent Mr P. Ryan, District Officer</p>

9 May 2011	Fire and Emergency Services Authority Mr D. Lamont, Manager, Water Policy and Safety
9 May 2011	Mr B Brown , Resident – Brigadoon
10 May 2011	Fire and Emergency Services Authority Mr C. Hynes, Chief Operations Officer
10 May 2011	Fire and Emergency Services Authority Mr C. Arnol, Assistant Chief Operations Officer – Country
11 May 2011	SGIO Mr R. Cory, Manager – Corporate Affairs
11 May 2011	Fire and Emergency Services Authority – Board Mr A. Skinner, Chairman
12 May 2011	Bassendean Volunteer Fire and Rescue Brigade Mr M. Smith, Captain
12 May 2011	Western Australian Farmers Mr A. Hill, Director of Policy Mr D. Park, Senior Vice President
13 May 2011	Jandakot Volunteer Bush Fire Brigade Mr S. Dobson, Captain
17 May 2011	Serpentine Jarrahdale Shire Mr D. Gossage, Manager, Emergency Services
18 May 2011	Western Australian Police Mr C. Dawson, Deputy Commissioner

18 May 2011	Mr J. Mensink , Resident – Kelmscott
20 May 2011	Jandakot Volunteer Bush Fire Brigade Mr S. Harris, First Lieutenant
20 May 2011	Mr T. Mills , Station Officer, Success Fire Station
20 May 2011	Fire and Emergency Services Authority Mr L. Cuneo, Assistant Chief Operations Officer - Coordination

ANNEXURE 6 - DEC INCIDENT ESCALATION REPORT

DEC 661
(10/08)

Department of Environment and Conservation

Incident Escalation Report

To be prepared by the Regional Duty Officer as per FOG 83 in consultation with the District Duty Officer and Incident Controller.

Regional Duty Officer to provide this Incident Escalation Report to the State Duty Officer, Regional Manager and Operations Area Manager.

Operational Period From to Date	Incident Name	Date Prepared	Time Prepared	Prepared by

This incident, previously determined to be a:

Level 1 Level 2 Level 3 incident

Has been re-assessed as being a:

Level 1 Level 2 Level 3 incident

The rationale for making this determination is based on:

Consideration	Comment (Provide explanatory comment where appropriate)
Resources assigned/ required	
Values at risk	
Success of suppression action	
Current and predicted fire behaviour	
Risk to fire fighter safety	
Risk to public safety	
Risk of economic loss and disruption	
Level of political and media interest	
Other	

ANNEXURE 7 - INCIDENT ACTION PLAN

COPY

63

INCIDENT ACTION PLAN

INCIDENT NAME: <i>Rodriguez</i>	OPERATIONAL PERIOD OF PLAN: From: <i>1300</i> To: <i>1800</i>	DATE PREPARED: <i>6-2-2011</i>	TIME PREPARED:	PAGE NO. <i>1</i>			
INCIDENT CONTROLLER: <i>GARY KENNEDY</i>	OPERATIONS OFFICER: <i>PAUL RYAN</i>	PLANNING OFFICER: <i>D. JOHNSTON</i>					
AREA COVERED BY PLAN: _____							
STRATEGIES / TACTICS TO BE EMPLOYED: <i>PROTECT LIFE - PROPERTY</i>							
ALTERNATIVE STRAGIES CONSIDERED: _____							
RISKS (Operational, Environmental, Public): _____							
SAFETY & OTHER ISSUES TO BE CONSIDERED (Personnel & Public): _____							
WEATHER			TEMP.	RELATIVE HUMIDITY	WIND SPEED / DIRECTION	RAIN / PRECIP	COMMENTS
CURRENT @	<i>1400</i>	HRS	<i>29</i>	<i>19</i>	<i>E 33 Gust 50</i>	<i>—</i>	
PROJECTED @	<i>1700</i>	HRS	<i>30</i>	<i>18</i>	<i>E 31 Gust 43</i>		
PROJECTED @	<i>2000</i>	HRS	<i>26</i>	<i>24</i>	<i>E 35 Gust 50</i>		
PROJECTED @	<i>2300</i>	HRS	<i>23</i>	<i>31</i>	<i>E 38 Gust 65</i>		
PROJECTED @	<i>0200</i>	HRS	<i>20</i>	<i>48</i>	<i>E 40 Gust 70</i>		
CURRENT FIRE DANGER							
FIRE DANGER RATING:							
FUEL TYPE:				RATE OF SPREAD:			
FUEL TYPE:				RATE OF SPREAD:			
FUEL TYPE:				RATE OF SPREAD:			

Version 1 December 2003

ANNEXURE 8 – LIST OF ACRONYMS

ABC	Australian Broadcasting Corporation
AFAC	Australian Fire and Emergency Services Authorities Council
AIIMS	Australasian Inter-Service Incident Management System
BAL	Bushfire Attack Level
BFS	Bushfire Service
BOM	Bureau of Meteorology
BPZ	Building Protection Zone
BRAG	Bushfire Ready Action Group
Bushfire CRC	Bushfire Cooperative Research Centre
CAD	Computer Aided Dispatch
CALM	Conservation and Land Management
CDJSC	Community Development and Justice and Standing Committee
CEO	Chief Executive Officer
CESM	Community Emergency Services Manager
CFA	Country Fire Authority (Victoria)
CFM	Community Fire Manager
CFRS	Career Fire and Rescue Service
COAG	Council of Australian Governments
COMCEN	Communications Centre (FESA)
CSIRO	Commonwealth Science and Industrial Research Organisation
DCP	Department for Child Protection
DEC	Department of Environment and Conservation
DPC	Department of the Premier and Cabinet

DSE	Department of Sustainability and Environment (Victoria)
EMA	Emergency Management Australia
EMS	Emergency Management Services
EMWA	Emergency Management Western Australia
ESL	Emergency Services Levy
FDI	Fire Danger Index
FESA	Fire and Emergency Services Authority (Western Australia)
GPS	Global Positioning System
HMA	Hazard Management Agency
IBMC	Interagency Bushfire Management Committee
IBRMS	Integrated Bushfire Risk Management System
ICV	Incident Control Vehicle
IMT	Incident Management Team
ISG	Incident Support Group
KVA	Kilo-volt Amps
LFB	London Fire Brigade
MIR	Major Incident Review
MOU	Memorandum of Understanding
OASG	Operational Area Support Group
PING	Public Information Group
RDL	Department of Regional Development and Lands (Western Australia)
SCC	State Coordination Centre
SECG	State Emergency Coordination Group
SEMP	State Emergency Management Policy
SES	State Emergency Service

SLIP	Shared Land Information Platform
SSS	Spatial Support System
SST	Sea Surface Temperature
SUPP	State Underground Power Program
TOR	Term of Reference
UCL	Unmanaged Crown Land
UK	United Kingdom
UMR	Unmanaged Reserve
UWA	University of Western Australia
VBFB	Volunteer Bushfire Brigade
VES	Volunteer Emergency Service
VFRS	Volunteer Fire and Rescue Service
VFS	Volunteer Fire Service
WA	Western Australia
WALGA	Western Australian Local Government Association
WAPOL	Western Australian Police