Disclaimer

In addition to original documents and other records, this report has been compiled from information obtained in interviews, meetings or other direct contact with a range of stakeholders during the period February to May 2014. Observations contained in the report concerning what worked well, and opportunities for improvement, are based on analysis of that information. Additional or varying information may become available after the report has been completed. This report is designed to identify improvements and does not endeavour to provide a definitive or exhaustive account of the events surrounding the Parkerville Stoneville Mt Helena bushfire of January 2014.

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Special thanks also go to the New South Wales Rural Fire Service and South Australian Department of Environment, Water and Natural Resources for providing staff members who contributed their expertise and experience to the Review. This peer assessment opportunity was arranged through the Australasian Fire and Emergency Service Authorities Council.

Image Acknowledgements:

*Mopping up at Parkerville (front cover):* Photograph taken by Chris Caudwell of Parkerville 20 January, 2014.

*Aerial Photograph of Parkerville Stoneville Mt Helena Bushfire (back cover):* Photograph taken by DFES staff 12 January 2014, approximately 40 minutes after ignition.

Authorship and Accountability

While this Report is the responsibility of the SEMC, the Review was conducted in conjunction with the Department of Fire and Emergency Services (DFES) and the Department of the Premier and Cabinet (DPC). Staff from the SEMC Secretariat, DFES and DPC all contributed to what is viewed as a joint report serving the needs and identifying improvements which will be helpful to all three agencies. The report was approved by SEMC at its meeting on 10 June 2014.
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1. BACKGROUND

1.1. The Event

The Parkerville Stoneville Mt Helena Fire started at approximately 11:00 am on Sunday 12 January 2014 after a power pole on a Granite Road property fell causing sparking and ignition of vegetation.

Initial response and incident management functions were undertaken by the Shire of Mundaring Chief Bush Fire Control Officer. As the incident progressed, fire suppression and incident management resources increased through provision of Department of Fire and Emergency Services (DFES) equipment and personnel. At 12:30 pm, approximately 90 minutes after the incident was first reported, a Bush Fires Act 1954 section 13 transfer of control declaration was invoked, after which DFES became both the Hazard Management Agency and Controlling Agency for the incident.

Continued management and suppression of the fire was carried out through the deployment of resources drawn from DFES, Shire of Mundaring and Department of Parks and Wildlife (DPaW) staff and equipment as well as volunteer fire fighters. A multi-agency Incident Management Team was established. A range of strategies was employed to contain the spread of the fire and, where possible given the nature of the threat and the priority to avoiding death or injury, prevent property loss and damage. During the incident DFES and DPaW aviation services achieved a peak of operational activity not previously experienced by either agency. The fire was considered to be contained by mid-evening on 12 January and was progressively extinguished over ensuing days. The fire was not considered ‘blacked out’ until the morning of 1 February, twenty-one days after ignition.

Fifty-seven residential properties were destroyed in the fire, six were extensively damaged and numerous sheds and other structures were also affected. No lives were lost or serious injuries reported.

One thousand three hundred and eighty six people were registered as evacuees with the Department for Child Protection and Family Support (CPFS) and the Australian Red Cross. An evacuation centre was established at the Mundaring Recreation Centre before being relocated to the Brown Park Recreation Complex in Swan View. This facility remained the sole evacuation centre and later became the recovery centre for the incident. On 21 January, the recovery centre was relocated to the Hub of the Hills Community Centre in Mundaring which became a one stop shop for provision of services to residents affected by the fire.

1.2. The Review

On 13 January 2014 the Minister for Emergency Services, the Hon Joe Francis MLA, announced that DFES would conduct an internal review into the fire response and that the State Emergency Management Committee (SEMC) would also examine the incident. It was subsequently decided that SEMC would lead a collaborative review in order to capture learnings from the event including prevention/mitigation, preparedness, response and recovery aspects. Several agencies and organisations also conducted their own debrief or incident analysis, which fed into the larger Review. It was determined at an
early stage that the focus of the Review should be to acknowledge those areas that were generally regarded as having worked well, in addition to identifying areas for improvement.

A Review Steering Committee consisting of the SEMC Chair, the Fire and Emergency Services Commissioner and the Director General of the Department of the Premier and Cabinet was convened in March 2014. Terms of Reference for the Review were agreed (Appendix One) and a Review team established, which included officers from the three agencies represented on the Steering Committee, two independent members with bushfire fighting expertise from other Australian jurisdictions and an independent consultant. The full Review team is detailed in Appendix Two.

The Review team gathered information by way of reports and event-specific records, site inspections and interviews with government and non-government staff and/or volunteers involved in the incident. The team interviewed firefighters and other emergency service personnel who were directly engaged in the response and/or continue to be engaged in the recovery process. A full list of interviewees can be found at Appendix Three. Importantly, affected residents were invited to write, email, text or ring the Review team to discuss their experiences. Twenty one email submissions and six telephone calls were received.

Written submissions were received from the Fire Control Officers and Captains Group of the Mundaring Bushfire Service; the United Firefighters Union of WA; Stoneville and Parkerville Progress Association Inc; Association of Volunteer Bush Fire Brigades of WA Inc; Shire of Serpentine Jarrahdale Volunteer Brigade, the Bushfire Front Inc and the Department of Parks and Wildlife.

During the Review, some matters were identified that did not bear specifically on the course of events of the Parkerville Stoneville Mt Helena event but which point to opportunities for improvement in the management of bushfires. These issues are to be found under Other Relevant Matters in Section 9 of the report.

1.3. Approach to the review

The SEMC, in deciding to undertake an independent review of the Parkerville Stoneville Mt Helena fire, also decided that a joint review would be more effective. As a result, DFES and the Department of The Premier and Cabinet contributed personnel to the review team. For a joint review to be effective it must be underpinned by a collegial learnings approach that:

- Enables open sharing of information
- Facilitates open discussions and increases understanding
- Reduces defensiveness and prepares stakeholders for greater acceptance of recommendations / suggestions for improvement (which in turn, gives impetus to implementation).
- Obviates the need for the Controlling Agency (in this case, DFES) to undertake a separate Major Incident Review.
The fact that this joint review was undertaken demonstrates organisational maturity and the joint focus on planning, training, coordination and teamwork. There is also an acknowledgement that in pressurised, dynamic situations where many factors come into play, such as a serious bushfire, judgements need to be made quickly, unanticipated logistical difficulties can be experienced and one can never be sure whether different or multiple tactics would have produced a different result. For this reason the judgements made can be questioned in hindsight but this should be done in the spirit of on-going improvement.

It is apparent that much can be learnt from reviewing events and determining what worked well and where improvements can be made. The organisations involved in this review welcome the opportunity to improve.

Furthermore, reviews conducted through the auspices of an independent agency supported by some independent experts that involve input from a wide range of perspectives but which are analysed objectively by persons with expertise and a questioning approach are likely to have a better outcome.

In keeping with the comments immediately above, the approach of this review can be summarised as a knowledge management and improvement exercise that drew comment from a wide cross section of stakeholders. The continuous improvement, no-blame, learning framework will enable the SEMC, the SEMC Secretariat and the participating agencies to retain that knowledge internally for future benefit and to have soundly based information to continue to improve. Similarly, significant stakeholders in the bushfire ambit, like the Department of Parks and Wildlife (DPaW) and volunteer brigades can benefit from the learnings as well.

The rationale discussed above also underpinned the collaborative approach undertaken within the review team. Moreover, the actual composition of the review team assisted the desired approach of the SEMC. Hence, the review team consisted of experienced officers from the three contributing agencies, an independent and knowledgeable consultant and two experts from other jurisdictions who contributed astutely to both sides of the equation i.e. what worked well and what could be improved upon.

All of the elements described above contributed to an outcome that reflects the principles underpinning the review and is hopefully going to be beneficial to stakeholders.

2. WHAT WORKED WELL

No deaths or serious injuries occurred as a result of the Parkerville Stoneville Mt Helena bushfire. The loss of fifty-seven houses, the damage caused to many others, and the experience of the event itself will however have both immediate and long term impacts on the three communities.

The Review noted the marked absence of public anger following this event, unlike some other bushfire events in recent times that have resulted in loss of life or property. This is not to say that people may not be deeply upset at their loss or that they do not have private grievances. It is notable however that expressions of blame from the public and media are largely absent from the Parkerville Stoneville Mt Helena event.
Interviews and analysis undertaken as part of the Review suggest that a number of factors may have contributed to this outcome. The directly affected communities of Parkerville, Stoneville and Mt Helena may have a greater appreciation of bushfire risk than other communities in high bushfire risk areas in the State. Evidence of a good level of risk awareness is reflected in residents’ submissions to the Review. There is also a large and active volunteer firefighting community in the Shire of Mundaring. It is possible that this has contributed to building a level of preparedness, both physical and psychological, that has assisted the community both in response and recovery.

Prior to the event, the Shire of Mundaring had in place appropriate emergency planning arrangements, which included a disaster recovery plan. The local emergency management arrangements and recovery plan were exercised and, as discussed in Sections 5 and 8, an active fuel mitigation program was in place. The Shire gave emphasis to building community capacity and preparedness through the support given to volunteer bushfire brigades.

In contributions to the Review there was little if any criticism from the community of the actual firefighting activities. Indeed, community responses frequently expressed appreciation for the efforts of firefighters. Similarly, any criticism offered by media at the time of the fire tended to be directed towards residents regarded as inadequately prepared rather than at the firefighting effort.

Apart from problems created by the small size and lack of facilities at the initial evacuation centre, the recovery process was handled well. The Australian Red Cross was well regarded for its work in the registration and connection of displaced residents and their door to door follow up of some affected residents to conduct a needs assessment and provide personal support. There was significant positive feedback from responders and the community regarding the work of all the welfare and support organisations involved in the incident.

As a result of the learning from the experience of the 2011 Perth Hills fire, the Department of Fire and Emergency Services, the Department of Child Protection and Family Services and the Shire of Mundaring ensured that residents were informed of house losses while protecting the privacy and dignity of those who had to be told the bad news. Outside the control of the authorities was the unfortunate media airing of images of lost houses before the residents could be told. This caused great distress.

Many respondents also commented on the work done by the essential service providers, especially Western Power, in restoring services or making temporary arrangements to minimise the impact of the event. It was also noted that Telstra quickly offered practical support to both their own customers and customers of other carriers.

Action by the Department of the Premier and Cabinet and the State Recovery Controller ensured the swift allocation and release of State and Commonwealth relief monies. This work was further assisted by the hard work and rapid decision making of the Shire of Mundaring, which resulted in early distribution of the funds to eligible recipients.

Very helpful to affected residents was the joint work of the State Recovery Controller and the Insurance Council of Australia in speeding up the claims assessment process and resolving a number of other insurance matters. For example, following discussions with
the State Recovery Controller, the Council confirmed that payouts by insurance companies would not be reduced as consequence of the State Government making direct payments to property owners to assist with clean-up costs.

These and other matters are canvassed more fully in the following sections of the report.

3. OPPORTUNITIES FOR IMPROVEMENT SUMMARY

While recognising that in many cases the implementation of improvements is ongoing, the Review identified a number of specific actions that could improve the management of bushfires, both in general and in the specific circumstances of municipalities located in the Perth Hills. Each of these proposals is discussed later in the report, in the sections indicated.

3.1 Legislation, Policies and Plans

Opportunities for improvement in emergency management policy and planning at the State level are noted in later sections of the report according to whether they apply to the response, preparedness or recovery aspects of the event. However, the following opportunities that apply across the whole emergency management spectrum were also identified in the Review and are discussed mostly in Section 8 but also in sub-sections 4.2 and 7.1.

3.1.1 The forthcoming review by SEMC of SEMP 4.4 Recovery Coordination and Westplan – Recovery Coordination and SEMP 4.1 Incident Management should include consideration of:

- the process for establishing a State Emergency Coordination Group (SECG) and the frequency of SECG meetings during an emergency;

- clarifying of the criteria for declaring an incident at Level 2 or 3

- Clarifying the criteria for handing over control of the incident from the Controlling Agency to local government and the transition from response to recovery

- the development of processes to ensure that ‘betterment’ is considered in recovery plans, including the identification of roles and responsibilities.

3.2 Bushfire Prevention

Submissions and interviews with agency staff indicated that a strong focus on communities is necessary in the planning and implementation of prevention and mitigation measures, in order to create an informed, knowledgeable and prepared public. This is discussed in Section 5.6.
3.2.1 Staff and consultants skilled in community engagement practice should be specifically included in bushfire risk management planning and preparedness building programs undertaken by State agencies and/or local government.

3.3 Bushfire Preparedness

The Review identified opportunities to improve the understanding of roles and responsibilities in emergency management by key players in order to enhance bushfire preparedness. These are discussed in Section 5.5.

3.3.1 SEMC Secretariat Community Emergency Management Officers should work with the Shire to document the Shire of Mundaring’s learnings from the Parkerville Stoneville Mt Helena fire with a view to sharing this with other local authorities particularly those facing similar situations in order to extend the range of tools available to assist local governments to understand their roles and responsibilities in future emergencies.

3.3.2 DFES should review its training courses and Standard Operating Procedures to satisfy itself that all incident management personnel have the required level of understanding of WA emergency management arrangements, including those that relate to the roles of the Incident Management Team and Incident Support Group and the declaration of incident levels.

3.4 Leadership Expertise in rural-urban interface fire leadership

A number of submissions raised the importance of DFES’ leadership role in the development and maintenance of bushfire management expertise in Western Australia as well as the ongoing need for all the key firefighting agencies to develop complementary approaches to firefighting doctrine and practice. This issue is discussed in detail in Section 5.1.

3.4.1 DFES should increase and maintain urban interface bushfire skills and expertise. Appointments to senior roles within the agency should include people with experience and credibility in bushfire firefighting and management.

3.4.2 The Executive Teams of both DFES and DPaW should meet quarterly to review and agree joint improvements relating to issues of interoperability, complementarity and the alignment of firefighting doctrine. The establishment of a unified command in joint State Operations Centre, Regional Operations Centre and Incident Management Teams should be pursued as an overarching goal.
3.4.3 In addition to regular meetings of the DFES/DPaW Interagency Bushfire Management Committee, the two organisations should use joint exercises to identify agreed firefighting approaches for common or likely scenarios.

3.5 Bushfire Response

A range of opportunities for continuous improvement in relation to operational matters was noted during the Review. These are discussed in particular in Section 7. It should be noted that the fact that the Response benefitted from improvements identified as a result of previous incidents enabled more refined or detailed improvements to be identified, the adoption of which is designed to lead to best practice.

3.5.1 Standard Operating Procedure 1 (Mobilisation Zone 2, Perth Hills area) should be reviewed to ensure that appropriate escalation triggers and levels of operational readiness are in place for future periods when severe fire weather conditions are forecast.

3.5.2 Appropriately equipped Incident Control Centres should be identified and/or established throughout the Perth Hills to meet the requirements of a fully resourced Incident Management Team in future bushfire events.

3.5.3 Future appointments to the role of Incident Controller should be limited to one for the entire duration of the incident, with nominated Deputy Incident Controllers to assist or ‘take charge’ in the Incident Controller’s absence. This measure will provide for a single point of responsibility and control for the incident and assist with any subsequent review or enquiry. If it is not possible to implement this proposal for liability reasons, the number of Incident Controllers should nevertheless be reduced to the minimum.

3.5.4 Whenever a Bush Fires Act 1954 section 13 transfer of control is invoked, the Incident level of an event should also be reviewed and any changes documented.

3.5.5 All agencies engaged in bushfire response should develop expeditious procedures for the mobilisation of resources in support of other agencies. See discussion in Section 7.1.

3.5.6 Radio infrastructure in the Perth Hills should be reviewed to assess whether it is practicable for radio and/or mobile phone coverage to be improved to achieve better coverage across the area.

3.5.7 The role of the Ground Controller should be reaffirmed in operational doctrine and reinforced in Incident Management Team training. During incidents involving aircraft the appointment of a Ground Controller should be confirmed by the Incident Controller.
3.5.8 Procedures should be reviewed to address the risks associated with response aircraft all working from one forward operating base, including the need for a designated fire protection unit to be available in the event of an aircraft-related fire or other emergency incident.

3.5.9 Training and awareness raising should be conducted to enhance the appreciation and understanding of DFES State and Regional operational personnel, including potential Incident Management Team members, of the nationally adopted Bushfire Alert and Messaging Matrix, in order to ensure that the most appropriate alert levels and associated community messaging are applied during bushfire incidents.

3.5.10 Procedures should be established to monitor the use of heavy plant during a bushfire incident, including the tasking of support appliances. Procedures should provide for the appointment of a dedicated Machinery Supervisor as prescribed within the Australasian Interservice Incident Management System.

3.5.11 Automatic Vehicle Location technology should be adopted to enable a better appreciation of the deployment and location of appliances at an incident, in order to increase situational awareness.

3.5.12 Consideration should be given to an automatic ‘Advice’ notice being issued as soon as a fire is reported in a pre-determined high risk area such as the Darling Scarp on days when adverse fire weather conditions are forecast.

3.5.13 Relevant policies and Westplans should be amended to require that full consultation occurs between the Controlling Agency and the Department for Child Protection and Family Support regarding the location of the evacuation centre(s) in a bushfire incident.

3.5.14 DFES should prepare a Standard Operating Procedure for the conduct of community meetings, and have available the appropriate audio visual and other equipment, to ensure that such meetings are able to fulfil their function in providing information and direction.

3.5.15 A Restricted Access Permit system for the entry/ re-entry of residents, based on the one developed for the Parkerville Stoneville Mt Helena Bushfire should be finalised.

3.5.16 DFES, in consultation with bushfire volunteers should develop a procedure for the controlled entry and exit of volunteers to the fire ground.
3.5.17 *Every effort should be made to enhance the ability of communications personnel to cope with fast moving and time critical fire events by providing and maintaining:*

- ongoing extensive communications training;
- advanced vehicle capability for clear communication within areas of radio coverage dead spots;
- ability to receive Air intelligence live streaming;
- map production facilities;
- deployment of multiple Incident Control Vehicles when required;
- all Incident Control Vehicles with access to DFES Information Technology Systems.

3.6 **Recovery**

In addition to the improvements which are ongoing following previous incident reviews, recovery management could be further improved by the SEMC Secretariat working to put in place changes including the following.

3.6.1 **SEMP 4.4 and Westplan – Recovery Coordination should be amended to:**
- clarify the wording around handing over control of the incident from the Controlling Agency to local government and the transition from response to recovery;
- include principles and criteria that will assist the Controlling Agency and local government to determine the best time to effect a hand over of control of the incident;
- make explicit the roles and responsibilities of the parties involved in the handover of control of the incident;
- specify the information required in the needs and impact assessments provided to local government by the Controlling Agency so that local government is given sufficient information to take control of incidents;
- clarify the roles, responsibilities and the title of the State Recovery Controller and ensure that the appropriate wording is reflected in Westplans and State Emergency Management Policies;
- Hazard Management Agencies, combat and support agencies and local governments need to fully inform themselves of the role of the State Recovery Controller.
Controller and implement a more effective approach to communicating internally the changes or additions to Westplans, State Emergency Management policies or procedures adopted by the SEMC;

3.6.2 Consultation with the Board of the Lord Mayor's Distress Relief Fund and other disaster appeal organisers should be undertaken to determine the potential for software development to consolidate the application and approval process, including provision of templates and application forms;

3.6.3 Development of a template contract for the clean-up of affected properties to speed-up the process;

3.6.4 Consultation should be undertaken with agencies and organisations that are engaged in emergency welfare provision to identify more effective ways to provide a consistent message to the community that non-cash donations are not required.

4. CONTEXT

4.1 Previous Reviews

There have been a number of significant reviews and inquiries following bushfire incidents in Western Australia in the last three years. These have included:


- 'Appreciating the Risk: Report of the Special Inquiry into the November 2011 Margaret River Bushfire' prepared by Mick Keelty AO;

- Major Incident Review of the Lake Clifton, Red Hill and Roleystone Fires, prepared by Stuart Ellis AM in June 2011;

- Report on the Post-Incident Analysis of the 2011 Margaret River and Nannup Bushfires, prepared by Noetic Solutions Limited;

- Major Incident Review for the Black Cat Creek Fire of 2012 in the City of Albany, prepared by Leading Emergency Services.

The Review noted that there have been improvements in the capabilities of the major fire-fighting agencies arising from the implementation of recommendations contained in these reports. Where appropriate this Review has referred to those improvements.

4.2 Legislation, Policy and Plans

The terms of reference required the Review to address:
the relevance and effectiveness of recent SEMC approved changes to policies, plans and associated agency procedures at incident, operational and strategic levels;

- the effectiveness of relevant legislation such as the Bush Fires Act 1954 and the Emergency Management Act 2005.

State Emergency Management Policy 2.9 - Management of Risks was adopted by the SEMC in December 2012; a revised version clarifying agency responsibilities under the policy was endorsed in March 2013 and further updated in March, 2014. The adoption of a risk management approach by the SEMC in 2012, based on the application of AS/NZ ISO 31000:2009 Risk Management Principles and Guidelines, is intended to make risk management the foundation of emergency management policy and practice in Western Australia. This emphasis is also reflected in changes to other policies and procedures issued by the SEMC in the twelve months before the Parkerville Stoneville Mt Helena bushfire.

Amongst other things, SEMP 2.9 provides that nominated local government authorities will develop specialised Emergency Risk Management Plans for bushfire. These plans will form part of local emergency management arrangements for the purposes of the Emergency Management Act 2005. Plans will initially be prepared under a Bushfire Risk Management Planning process; a pilot program involving four local governments in areas identified as high risk for bushfire commenced under DFES auspices in early 2014. The Shire of Mundaring is not one of the local governments involved in the pilot.

All the information available to the Review suggests that the announced decision to proceed with Bushfire Risk Management Planning process is important and its progress will result in further improvements. A heightened awareness of the need to embed a risk management approach was also taken into account in revising a handover document for use in the transition from response to recovery as described in Section 8.

State Emergency Management Policy 4.4 – Recovery Coordination (SEMP 4.4) was reviewed in March 2013 in order to address the recommendations of a 2011 Emergency Management Western Australia report ‘Recovery in Context – A Review into the Western Australian Recovery Management Arrangements’. The recommendations included to remove the operational functions of the SEMC Recovery Services Sub-committee and to provide for the establishment of a State Recovery Coordination Group and the creation of a State Recovery Controller position. While some changes in State recovery arrangements had been implemented as a consequence of the reconstitution of the SEMC in 2012, a revised SEMP 4.4 to give full effect to these recommendations was endorsed by SEMC in September 2013. In particular, the appointment of a State Recovery Controller had particular relevance to the Parkerville Stoneville Mt Helena fire, with an officer from the Department of the Premier and Cabinet appointed to the role on 1 January 2014.

The State Recovery Controller has a wide range of roles including to review the recovery arrangements established by local governments; liaise with, support and maintain contact details for all local recovery coordinators; provide reports to the Minister for Emergency Services, SECG and controlling agency and to Chair the SRCG. The State Recovery Controller is responsible to oversee recovery planning and the preparation and
maintenance of state and local recovery arrangements through the SEMC Recovery Subcommittee.

Although State agencies, including DFES, and local government authorities had the opportunity to comment on SEMP 4.4 prior to its adoption by the SEMC, the position of State Recovery Controller was not well recognised or established at the time of the Parkerville Stoneville Mt Helena incident. Several informants indicated that there was uncertainty about the role. Furthermore, there was a perception that changes to the documentation of the handover process, which was being carried out at the instigation of the State Recovery Controller, was an example of policy and procedures being made ‘on the run’. This matter is discussed in greater detail in Section 8, including a number of proposals for improvement.

Consideration of the role of the Recovery Controller raises broader issues about the role of the State Emergency Coordination Group (SECG). It was observed during the Review that the SECG is usually only convened during the immediate response phase of an emergency, and generally concerns itself only with the coordination of emergency response, whereas the role specified in the Emergency Management Act 2005 is broader.

The Act provides that the role of the SECG includes to ensure coordinated emergency management; provide advice and direction to public authorities and other persons to facilitate effective emergency management; liaise between emergency management agencies and the Minister. Westplan –Recovery Coordination and SEMP 4.4 also refer to the role of the SECG in recovery coordination. During the Parkerville Stoneville Mt Helena Bushfire the SECG met only once, at 10.00 am on Monday 13 January. It was suggested to the Review that it would be appropriate for the SECG, as a matter of course, to retain oversight of an incident beyond the immediate response so as to ensure that all matters relevant to recovery, both immediate and long term, have been properly considered and that appropriate arrangements are in place. This would include, for example, that the SECG coordinate the handing over of control of an incident to the local government. In this process the SECG would need to seek advice from the State Recovery Controller, the Controlling Agency and all other relevant agencies to be satisfied that it is appropriate for control to be handed over to the local government and to ascertain if the local government needs further support. Alternatively, the SECG could decide what other actions should be taken.

The process of establishing an SECG is pursuant to clauses 20 and 21 of SEMP 4.1 Incident Management and is largely dependent on the declaration of the level of the incident. Clarity could be added to these clauses to ensure that matters beyond response are dealt with in a coordinated way and that the Minister responsible for the Emergency Management Act 2005 is appropriately briefed.

The responsibility of SECG for coordinated emergency management and not just emergency response has implications for the structure of SEMC’s policy framework, which is currently compartmentalised. Westplans and SEMC policies are clearly interrelated but sometimes overlap or occasionally are mis-aligned. DPAW in their submission commented that
“there is still a need to reliably map Westplan Fire against the requirements of SEMP 4.1”

SEMC has recently decided to review its policy framework and this intention is reflected in the SEMC strategic plan. The Review supports this intention and clarification of the aspects of the relevant plans and policies referred to above.

In its submission to the Review, the Stoneville and Parkerville Progress Association provided a copy of a letter it had sent to the Member for Swan Hills in relation to power poles on private property. In the letter the Progress Association suggested that new standards should be developed for the power pole construction material and for the installation or replacement of power poles and power lines. Betterment, which can be defined as the repair or replacement of an asset to a more disaster resilient standard than its pre-disaster standard, can be an important part of building community resilience. The principle is reflected in national strategies such as the National Partnership Agreement on Natural Disaster Resilience. It is the SEMC’s view that betterment should be an objective of local government recovery plans. This matter is also relevant to the review of SEMP 4.4 Recovery Coordination and Westplan – Recovery Coordination by SEMC.

In his report on the Perth Hills Bushfire, Mick Keelty AO recommended that responsibility for the management and distribution of the Emergency Services Levy (ESL) be transferred from the (then) Fire and Emergency Services Authority to the Department of Finance. This recommendation has not been implemented. The submission of the Association of Volunteer Bushfire Brigades to this Review argued that the ESL focuses on response and that more funding should be provided to local communities to increase community resilience. Other submissions pointed to the need to increase community resilience and place greater focus on rural bushfire services and initiatives such as the Bushfire Risk Management Planning process. The Bushfire Review Implementation Group is continuing to examine this matter.

**Opportunities for Improvement**

The forthcoming review by SEMC of SEMP 4.4 Recovery Coordination and Westplan – Recovery Coordination and SEMP 4.1 Incident Management should include consideration of:

- the process for establishing a State Emergency Coordination Group (SECG) and the frequency of SECG meetings during an emergency;

- the development of processes to ensure that ‘betterment’ is considered in recovery plans, including the identification of roles and responsibilities.
5. PREPAREDNESS

5.1 Leadership in Bushfire Management

Given the status of DFES as a Hazard Management Agency and its leadership role in bushfire policy development, policy implementation and service delivery, bushfire risk owners across the State will look to the Department for professional advice and guidance. To ensure a consistent and contemporary approach to advice and service provision, the ongoing development and maintenance of DFES’ central capability in bushfire management is critical. Although in-field advice to local risk owners is primarily a DFES regional responsibility, the central coordination of services will establish a quality assurance framework.

A number of submissions expressed strong concern about an apparent lack of bushfire fighting expertise and experience in DFES, particularly at a leadership level. This perception has been exacerbated by the recent departure of personnel with long experience in bushfire fighting and management and the apparent collapse of the section within DFES that focussed on bushfire matters. DFES is regarded by bushfire volunteers as a fire and rescue organisation, and some volunteers expressed the view that they had little regard for career staff’s knowledge and skills in bushfire fighting. Equally, the view was put that career staff demonstrated little regard for the knowledge and often extensive experience of bushfire volunteers. It is likely that reports of orders given by career staff and ignored by volunteers - and vice versa - are reflective of this situation. This is not a desirable state of affairs for the effective delivery of fire protection services to the community.

The Review noted that inclusion of a Volunteer Charter in any new emergency services legislation that may be proposed following the current legislative review is the preferred position of DFES. This may be helpful in addressing the problem of inter-service respect and recognition.

The Review was made aware that the interaction of DFES and DPaW in rural urban interface fires highlights some very different approaches to firefighting by the two agencies and that this is not an issue confined to the Parkerville Stoneville Mt Helena bushfire. The differences are demonstrated in a range of areas including the use of heavy machinery; defensive versus offensive firefighting; the tactic of asset protection; length of shifts for firefighters; mop up standards and appliances and equipment. Given the history and legislative mandates of DFES and DPaW, differences in firefighting approaches are not surprising. However, with an increasing population in rural urban interface areas and increasingly deficient rainfall in the south west of WA, the risk of bushfire with devastating consequences in these areas will continue to be high and DPaW and DFES will have to continue to work closely together in bushfire management and suppression. The Review acknowledges that the recent and ongoing efforts by both agencies in undertaking joint exercises will continue to improve mutual understanding of approaches to bushfire fighting. This needs to be supported by common systems and methods, where it is practical to do so, which will reduce frustration and potentially improve efficiency.
Further opportunities are also required to encourage ongoing dialogue on key issues concerning firefighting doctrine, practice, process improvement and inter-operability.

The Review considered a number of measures that could enhance mutual understanding.

### Opportunities for Improvement

DFES should increase, develop and maintain bushfire skills and expertise through the establishment of a dedicated bushfire command. Appointments to senior positions within the command should include people with experience and credibility in bushfire firefighting and management.

The Executive Teams of both DFES and DPaW should meet quarterly to review and agree joint improvements relating to issues of interoperability, complementarity and the alignment of firefighting doctrine. The establishment of a unified command in joint State Operations Centre, Regional Operations Centre and Incident Management Teams should be pursued as an overarching goal.

In addition to regular meetings of the DFES/DPaW Interagency Bushfire Management Committee, the two organisations should use joint exercises to identify agreed firefighting approaches for common or likely scenarios.

### 5.2 Local Fuel Mitigation Strategies

The Perth Hills is a rural-urban interface where forest fuels, steeply undulating topography and a mix of suburban and rural ‘lifestyle’ settlement patterns combine to create a challenging environment for fire management and fire suppression.

The Parkerville Stoneville Mt Helena bushfire was in large part an event characterised by the consumption of long-unburnt forest fuels along Jane Brook, a watercourse which abuts rural and urban lots on either side of the stream. Most of the creek system within the area burnt in the fire, and parallel to the railway reserve that follows the creek line, is on private property. The fire also went through an unconstructed road reserve along the creek at Iron Road. There are also two very small Crown reserves at the southern base of two private properties that cover the creek. Sections of Jane Brook to the east of Stoneville Road are within Shire reserves.

Fuel management in this context is complex, although achievable with careful planning and execution. Best practice would require significant pre-burn preparation of property boundaries and the segmentation of burn areas into management units or cells that can be treated in series. Such management units would not cross the creek line, so that each side of the creek could be burnt separately.

Where burning involves both reserve and private lands due to the vegetation crossing boundaries (that is, where there is no dividing firebreak), the consent of property owners is required to enter and remove fuel through burning. This has previously been a problem elsewhere in the Shire, when land owners have not supported entry onto their lands or the conduct of burns, even at the Shire’s expense. In addition, while making arrangements with consenting private land owners is not complex, coordinating the burn
days is very complex, particularly when land owners request to be present. It is difficult to arrange brigades, staff and other resources for specific days as the opportunity to burn, however carefully planned, depends upon daily weather conditions and resource availability. Issues also arise when rare flora and fauna are present. The Shire made a significant effort to reduce fuel loads in the fire zone prior to the fire, despite the fact that the Shire owns or manages only a small section of the land concerned and in the face of the other difficulties described above. Despite the Shire’s efforts, high fuel loads remained in the area ultimately affected by the fire, particularly along the creek.

There are approximately 600 parcels of reserve land in the Shire; this includes land owned by or vested in the Shire as well as Unallocated Crown Land and Unmanaged Reserves as well as privately owned land. This figure does not include land managed by DPaW, although the Shire Volunteer Bush Fire Brigades assist with some prescribed burns on DPaW land as part of a tenure blind approach to fuel load management and to ensure that cross-agency relations are maintained.

For the past two years the Shire has had two full-time Fire Protection Officers assigned to manage the Shire’s bush reserves and, where there is scope, assist in mitigation works on other lands including Unallocated Crown Land and Unmanaged Reserves.

At the time of writing the Shire was in the process of recruiting a full-time Fire Hazard Inspection Officer to work with private property owners to develop fuel load management plans, teach prescribed burning and enforce fire break notices. A second Fire Hazard Inspection Officer will be employed next financial year. While Shire Rangers already inspect private properties for compliance with fire break notices, and issue penalties for non-compliance, the extra position will enable year round inspections.

In 2012 there were 111 prescribed burns conducted in the Shire. These were on Shire land, Unallocated Crown Land, Unmanaged Reserves, land occupied by the Education Department and private land. There is currently no means to monitor the number of prescribed burns conducted by private land owners, though regular burning of this nature is known to occur throughout the Shire.

In 2013, due to unfavourable weather conditions limiting the opportunities, only 56 prescribed burns were conducted.

Some of Jane Brook, approximately 300 metres to the west of the intersection of Falls Road and Victoria Road, was burnt by the Shire last year. The creek forms property boundaries in this area, at the point where private land meets the railway reserve. Negotiations with land owners allowed access and fuel reduction on land in this area, where fire breaks were accessible. Creek lines have also been burnt to reduce fuel loads on other reserve lands in the Shire.

The Shire reserves along Jane Brook, made up of five separate land parcels, are very steep and it is cost-prohibitive to install firebreaks and undertake weed reduction programs in these areas. The creek surrounds are also highly susceptible to damage from soil erosion, acid sulphate disturbance, loss of native vegetation, introduction of weeds and creek bed pollution, all of which may be associated with burning activity. All of these factors present challenges to a prescribed burning program. The southerly aspect is also an issue as these slopes remain generally damp all year round.
The Mundaring Volunteer Bush Fire Brigades conduct prescribed burns on Shire land, Unallocated Crown Land, Unmanaged Reserves, Education Department land and private land. The Shire’s Community Emergency Services Manager or Deputy Chief Bush Fire Control Officers check the Shire-developed prescriptions prior to any burns by the Shire Fire Protection Officers or Volunteer Bush Fire Brigades. There are 26 schools in the Shire, 18 of which are in bushfire prone areas. Prescribed burns have been conducted around all of the schools assessed as needing them.

In their submission to the Review, the Mundaring Volunteer Fire Control Officers and Captains Group state;

“We also believe that the Shire of Mundaring has been very pro-active in bush fire risk reduction but clearly many of the property owners did not comply with the regulated bush fire risk reduction requirements of the (local government) fire break notice”.

The view of the Association of Volunteer Bush Fire Brigades is that not enough work had been done to ensure that adequate measures by individual property owners had been implemented. Similar views were expressed by the Bushfire Front and in comments from general community members identifying the need for private property owners to be more diligent in managing fuel loads.

The Review considers that the Bushfire Risk Management Planning program currently being trialled will assist the Shire to manage bushfire risk across tenures and will be a major step forward for bushfire management in Western Australia. Further, the implementation of guidelines and the related templates will also ensure that the appropriate future mitigation strategies are applied. Based on various submissions made, a more rapid rollout of this initiative could be advantageous, with funding allocated to maximise the opportunities for participation by local governments, so that the State reaps the benefit of the program as quickly as possible.

It was evident from site inspections undertaken as part of the Review that where mitigation strategies had been recently applied the fire behaviour worked in favour of suppression efforts, again providing support for the Bushfire Risk Management Planning process.

The Shire has developed a Bushfire Risk Management Plan template for implementation this year, which will also be used in preparation for the new Bushfire Risk Management Planning framework. The Shire is also changing its fire break notice to a “fuel load notice” to increase the emphasis on fuel load management in bushfire mitigation.

The Shire emphasises winter fuel burning, for which publications and training opportunities for the guidance of landholders have been developed. The winter burning program is strongly supported by local Volunteer Bush Fire Brigade members. In 2013 DFES provided training to ten senior volunteers on how to deliver the winter burning program. In turn, the volunteers have held winter burning workshops for private landholders. Those who attend this training receive a copy of the “Winter Burning Guide”.

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In addition to prescribed burning, the Shire also slashes and sprays woody weeds such as blackberry bushes. The Shire works with local ‘Friends’ groups on weed control and prescribed burning, including a specific program for blackberry and watsonia control.

The Shire has two budgets for fuel management activities – one for ‘mitigation’ and the other for ‘treatments’. The mitigation budget covers the costs associated with prescribed burning, with $30,000 allocated for 2013/14. The treatment budget covers the costs associated with all other bushfire prevention strategies, with $30,000 also allocated for 2013/14. This is mostly being spent on slashing, but is also used for mulching and fire break maintenance.

5.3 Training

DPaW, DFES and the Office of Bushfire Risk Management, through the Interagency Bushfire Management Committee, collaborate to produce curriculum and course material for prescribed burning. Safe and effective use of fire to reduce fuel loads requires specific skills and expertise. It is apparent that the implementation of more rigorous bushfire risk planning across different forms of land tenure will drive the need for more individuals and agencies to be competent in this area. Although larger agencies such as DPaW and DFES have taught these skills in the past, the materials on which the courses are based do not always reflect the most recent developments in risk management. The ongoing joint-agency work, revised curriculum and associated Training Resource Kits will address this need.

The wider issue of education and training in bushfire fighting was raised in several submissions, including claims that minimal training is provided to firefighters in combating bushfire and that most knowledge in this field is gained from attending incidents.

Current training resources provided are primarily theoretical and submissions suggested that one avenue to increase the practical opportunities for training is through involvement in hazard reduction burning. While it is understood that this type of fire does not directly replicate wild fire conditions, it does allow for inexperienced new firefighters to witness some elements of practical firefighting in a controlled environment. A collaborative approach to hazard reduction burning being used as a practical training tool could have the added bonus of assisting with the hazard mitigation issues already identified. It could also be conducted in conjunction with the development of Bushfire Risk Management Plans.

Generally, DFES career firefighters in the metropolitan area do not conduct hazard reduction burning as their focus is on fire response. However the identified training deficiencies affect firefighters in general and an increased level of bushfire training has been suggested for both volunteer and career firefighters. The format of such a training program could lead to additional positive consequences in the interoperability of agencies from continual sharing of training opportunities.

5.4 Planning and Land Management

The Shire of Mundaring Local Planning Scheme 4, gazetted in February 2014, enables the identification and declaration of bushfire prone zones. The declaration will affect
future building and construction standards in the Shire, requiring compliance with Australian Standard AS3959 – Construction of buildings in bushfire-prone areas.

The Association of Volunteer Bush Fire Brigades raised concerns about the delay in the implementation of recommendations in the Keelty report on the Perth Hills Bushfire relating to the declaration of bushfire prone areas. On 2 May 2014 the Government announced new measures addressing the Keelty recommendations. The implementation of these recommendations is supported and the recognition and declaration of bushfire prone areas across Western Australia will provide the necessary direction to local government and land managers in identifying and mitigating future risks and building resilient communities.

5.5 Local Emergency Management Arrangements

The *Emergency Management Act 2005* requires local governments throughout Western Australia to prepare and maintain local emergency management arrangements, which are to include a recovery plan and the nomination of a Local Recovery Coordinator. This responsibility is generally discharged through the work of a Local Emergency Management Committee (LEMC).

The Shire of Mundaring had local emergency management arrangements in place and had exercised them prior to the fire. The arrangements ensured that the Local Recovery Coordinator and other players in the recovery process were familiar with their roles and responsibilities. Regular LEMC meetings were well attended. Existing relationships between members of the Committee established through these arrangements were particularly valuable during the recovery process.

The current Recovery Plan was approved by Council in June 2012. The Plan was activated on the first day of the fire and proved to be very useful in guiding recovery efforts in the initial stages. The Local Recovery Coordinator reported that the checklists contained in the Plan were particularly useful. However, he also noted that the value of the Plan to the Shire decreased as the Shire and community moved further into the recovery process as the Plan focuses on managing the demands associated with the initial stages of the recovery phase.

Local Recovery Coordinating Committee meetings commenced on 13 January 2014. Meetings were held on a daily basis for the first week, and thereafter at regular but increasing intervals.

Community Emergency Management Officers employed by the State Emergency Management Committee Secretariat were particularly helpful in assisting the Shire to develop its local emergency management arrangements and Recovery Plan. These officers attended all recovery meetings in the early stages and provided copies of documents, including templates and fact sheets to assist the Shire. The previous experience of Community Emergency Management Officers in other emergencies was put to good use. Relationships between State agencies, local government representatives and community organisations established through the LEMC also assisted the recovery process.
Despite the existence of local emergency management arrangements and the assistance of the Community Emergency Management Officers, there was some uncertainty of the roles that were expected. This was apparent, for example, in the transition from response to recovery, and when the Shire was asked to set up the recovery centre and provide public address systems and other equipment for community meetings.

At the time of writing, the Shire was planning to undertake an evaluation of its experience with the fire. Evaluations are not commonly undertaken by local governments after incidents. However, local governments should be encouraged to do so in order to provide a basis upon which to share learnings with other local governments.

Having regard to the experience of the Shire of Mundaring, SEMC Secretariat will propose that Local Recovery Coordinators in the Perth Hills be encouraged to meet from time to time to share learnings from incidents that occur in their local government areas and to enhance their knowledge of disaster recovery. This would also help to develop a network that could be called upon to assist when emergencies occur. Similar groups could be established throughout the State.

The Review noted that the WA Local Government Association provides training for local government CEOs, elected members, managers and officers on matters relating to the responsibilities of local government under the Emergency Management Act 2005. These courses aim to assist local governments to initiate, coordinate and manage emergency management planning activities. One course is devoted specifically to the subject of managing recovery activities, including identifying the phases of recovery; developing a Local Recovery Plan; establishing and coordinating the activities of a Local Recovery Coordination Group; undertaking the key tasks of a Local Recovery Coordinator; and coordinating relevant emergency recovery financial arrangements.

A mutual aid agreement for recovery during emergencies was entered into by local governments in the Metropolitan North and East districts in 2004. The City of Swan assisted the Shire of Mundaring directly during the Parkerville Stoneville Mt Helena fire and other parties to the Agreement also offered their assistance. While not a party to the agreement, the City of Armadale provided significant assistance to the Shire, drawing on its experience with the Roleystone/Kelmscott bushfire. The City of Whittlesea in Melbourne also contacted the Mundaring Shire and offered its assistance.

State Emergency Management Policies provide for an Incident Support Group (ISG) to be convened in specified circumstances. The ISG is a group of agency or organisation liaison officers that is convened to provide agency specific expert advice and support in connection with the operational response to an emergency incident. The Review identified confusion around whether an ISG had been convened in connection with the Parkerville Stoneville Mt Helena fire. While DFES records show that an ISG met at 14:43 on Sunday 12 January, the meeting did not include key service providers who would normally attend such meetings. Some agencies believe that no ISG took place. It appears that the meeting held on 12 January may be better described as a hybrid between an IMT and an ISG meeting. In any event, Shire representatives attended the meeting. This assisted in keeping the Shire informed of the progress of the fire.
Incident management personnel need to ensure there is a clear distinction between the roles of the IMT and ISG and that all relevant agencies and organisations are made aware of and attend ISG meetings. Emergency management training courses and Standard Operating Procedures may need to be updated to ensure that this occurs.

**Opportunities for Improvement**

SEMC Secretariat Community Emergency Management Officers should work with the Shire to document the Shire of Mundaring’s learnings from the Parkerville Stoneville Mt Helena fire with a view to sharing this with other local authorities particularly those facing similar situations in order to extend the range of tools available to assist local governments to understand their roles and responsibilities in future emergencies.

DFES should review its training courses and Standard Operating Procedures to satisfy itself that all incident management personnel have the required level of understanding of WA emergency management arrangements, including those that relate to the roles of the Incident Management Team and Incident Support Group and the declaration of incident levels.

5.6 **Residents’ Preparedness**

Residents living on the Darling Scarp are at high risk of bushfire and preparation is critical.

The Review found that significant work has been undertaken by DFES Community Engagement and the Shire of Mundaring to implement recommendations of the Keelty Perth Hills Bushfire February 2011 review that related to increasing community preparedness. Much of this work has previously been reported to the Bushfire Review Implementation Group convened by the Government to oversee the implementation of the Keelty recommendations.

Volunteer firefighters in the Shire of Mundaring play an important role in engaging with the community. Ninety two community engagement sessions were recorded by the Shire’s LEMC between October 2012 and January 2014. Of these sessions, approximately fifty were principally for the purpose of communicating bushfire safety messages to the community through newsletters, open nights, property inspections and school visits. Others were opportunities to raise awareness of brigade activities and to promote recruitment.

There are thirteen Bushfire Ready Facilitators in the Shire of Mundaring including two in Parkerville, one in Stoneville and one in Mt Helena. Bushfire Ready is a local community action program to encourage residents to work together to prepare and protect their families and properties against bushfires.

The Shire of Mundaring regularly surveys its community. In the last survey 60% of residents reported that they had a bushfire plan although few exercised it. The Shire recently provided an opportunity for community members to practise implementing their bushfire survival plans using Facebook. This is in addition to at least one live exercise conducted within the last twelve months by a Bushfire Ready group in Darlington.
The Review noted that the Prepare.Act.Survive suite of publications had been reviewed and updated by DFES. The Department has also developed a strategy which includes the identification of high risk areas with priority and secondary locations for community engagement. New work has been undertaken in partnership with the Real Estate Institute to provide a bushfire preparedness fact sheet to more than 10,000 lessees and tenants in high bushfire risk locations and to provide information targeting new home owners (who as a group are less likely than long term residents to be familiar with the challenges and risks associated with a bushfire prone environment).

These actions have been reinforced by initiatives such as the “Are You Ready?” campaign conducted as a whole of Government approach in the lead up to the 2013/14 southern bushfire season. The campaign, valued at just under $1 million, was extensive in its reach; running throughout the bushfire season (Sunday 1 December 2013 and ran until Friday 28 February 2014). In the first television media campaign promoting bushfire safety in WA, three 30 second commercials were filmed and fronted by Victoria Cross recipient Ben Roberts-Smith. The commercials featured representatives from DFES, the Department of Parks and Wildlife, volunteer firefighter services and Western Power.

The key message of the Are you ready?” campaign was that while the Government continues to work towards mitigating the risk of bushfires, this is a shared responsibility and all residents should be prepared. In addition, the campaign directed audiences to a web portal, providing resources to assist in bushfire preparations. These resources included:

- Bushfire survival kit checklists
- Bushfire survival plan templates
- Guidance to protect properties
- Essential information (including contact numbers) to assist in recovering after being affected by a bushfire.

Generally, positive feedback was received in relation to both the messages communicated by the campaign, and the ability of the campaign to assist residents to access resources to prepare for an emergency. An independent evaluation affirmed this feedback, with survey results indicating that:

- 98% of residents surveyed in high risk areas (the South West and the Perth Hills) believed that advertising about getting ready for bushfires was very important or important; and
- the take-out of key messages among TV viewers (“communicates a lot or a fair amount) was between 90 – 94%.

The Review team was informed about an opportunity to test the impact of the campaign on community behaviour through research that DFES has commissioned concurrently with this Review. With the assistance of the Bushfire and Natural Hazards Cooperative Research Centre, DFES is undertaking detailed research on the bushfire risk knowledge.
and behaviour of residents who were in some way affected by the Parkerville Stoneville Mt Helena fire. This research will be conducted through detailed personal interviews and an on-line survey. The research will be similar to that commissioned by DFES after the Lake Clifton fires of January 2011 and will allow for comparison of data with that fire. [Editorial Note: results of the new research were not available in time for this draft but may be available to be included in the final report].

DFES has adopted a community engagement approach that guides the development of programs that encourage community involvement and participation to achieve behaviour change, which will in turn lead to a more resilient community. Based on the internationally recognised IAP2 Public Participation Spectrum, the DFES Community Engagement Framework recognises five levels of engagement: Inform, Consult, Involve, Collaborate and Empower. Despite the effort put into DFES publications such as Prepare.Act.Survive., these documents only reach the first of these levels, which is to ‘Inform’ whereas the aim is to bring about the level of engagement and awareness, or the behaviour change, required to maximise bushfire preparedness. Additionally, DFES participates at a national level in research into best approaches to engaging communities in hazard preparedness and response.

The Bushfire Ready Program, which is designed to facilitate collaboration and the empowerment of community members in their own safety, offers a far stronger mechanism to achieve the desired behaviour change and level of preparedness by drawing on volunteer community facilitators who are members of the local brigade. It brings together people from local neighbourhoods, the local fire and bushfire personnel, local government and DFES staff to discuss and learn about the bushfire hazard and its local implications. Community members then work together to build individual and community action plans and to implement preparedness activities. Central to this work is ensuring that community members know each other. These local connections will increase the likelihood that individuals will prepare their properties for a hazard and be effective in responding to the hazard.

The types of activities undertaken by Bushfire Ready Groups include: local group meetings which can be held in community member homes; development of emergency phone trees and other communication tools and systems; street meets which are open to all members of the community but are overseen by Bushfire Ready Groups; and property walk throughs where group members are provided with ‘on-the-ground’ advice on how to prepare their properties.

Supporting this approach are comments from community members who clearly value the strong neighbourhood connections in this area.

“Our home was saved by our neighbours”

“Our neighbours are not as friendly as in past years…..you need to take this in to consideration.”

Since the 2011 Perth Hills fires, DFES has worked to increase the number of Bushfire Ready facilitators in the State from 40 to approximately 150. Developing Bushfire Ready groups is resource-intensive. It relies on significant input and support by the Bushfire
Brigades, Volunteer Fire and Rescue Service, Volunteer Emergency Service, career firefighters, DFES and the Local Government. Considerable time is given to the program by volunteer facilitators and street coordinators who manage their groups and local activities in their own time. DFES has worked to provide recruitment, training and ongoing support/management to facilitators. During 2013/2014 this has included a significant improvement in the approach to annual training/forums, a focus on development of the facilitator training modules, improvements to communications tools and reference material (DFES Community Engagement Toolbox).

As a result of the Future Funding submission to Government following the Keelty Special Inquiry, additional resources have been provided and the Community Engagement team expanded to include an additional five staff. These include new Community Engagement Officers located in the Perth Metropolitan, South West, Lower South West and Great Southern regions. As welcome as this is, the ongoing challenge is illustrated by the fact that the officer allocated to the Perth area has to reach all residents in areas which could be affected by bushfire with bushfire awareness messages that are appropriate to their individual situations.

Resident preparedness needs also to take account of community members who may find it difficult to receive or act on messages. DFES has developed an At-Risk People Strategy based on a cooperative approach between State agencies, non-government organisations and other service providers to allow for a concerted approach to assisting community members who are most vulnerable during a bushfire emergency.

It is noted that the Community Engagement bushfire programs (including their development and evaluation) are delivered within a very modest annual budget of $150,000. This includes the Bushfire Ready program as mentioned above as well as other localised strategies in high bushfire risk communities. DFES Community Engagement’s work in promoting behaviour change and not just risk awareness is an important initiative. This work is however long term and it is difficult to measure its effectiveness on a seasonal basis. The more benchmarks that can be established and ongoing measurement undertaken, the better the effectiveness of the approach can be evaluated.

It was noticeable to the Review that the Parkerville Stoneville Mt Helena event has not generated the public outrage and expressions of blame that emerged in the aftermath of the 2011 Perth Hills Fire and the Victorian Fires of 2009. It may be that a relatively high level of mental and physical preparedness is present in the Mundaring community. It is also apparent that this community has a strong volunteer fire fighting history and culture. A number of community members mentioned matters relating to preparedness.

“We were aware that we could be vulnerable as our home backed onto a large hectare bush property.”

“…over the years we have prepared our property by clearing bush and installing a sprinkler system. We also have a firefighting unit and had additional manpower to assist on the day of the fire.”
“Preparedness education was helpful”

The Review considers that DFES and the Shire of Mundaring, including its bushfire volunteers, made significant efforts to assist residents to recognise bushfire risk and to act accordingly. This was reflected not only in the level of preparedness demonstrated but also the lack of public blame directed towards either organisation after the fire.

An important opportunity to boost community engagement exists with the introduction of the Bushfire Risk Management Planning process at the local government level referred to in Section 5.2. It is anticipated that many of the treatment options that will be identified through this process will need appropriate consultation and collaboration with the community rather than just more information being directed at them. It is also likely that the treatment options that will be identified will include explicit community education initiatives.

Opportunity for Improvement

Staff and consultants skilled in community engagement practice should be specifically included in bushfire risk management planning and preparedness building programs undertaken by State agencies and/or local government.

5.7 Operational Readiness

In the days leading up to the Parkerville Stoneville Mt Helena fire there were a number of strategies initiated by the relevant authorities to ensure that there was a heightened level of operational readiness. These measures included a directive from the Deputy Commissioner Operational Command, DFES to the Duty Assistant Commissioner to undertake planning and preparedness actions to ensure that DFES, other combat and support agencies and the community where prepared for the dangerous fire weather conditions that were forecast for the weekend of 11 and 12 January 2014.

These actions included additional staffing for task forces; staffing of emergency operations centres; issuing of media releases to raise community awareness; total fire ban declarations and additional appliances on standby. Operational preparedness teleconferences were held with DFES staff, volunteers and Chief Bushfire Control Officers from local governments across affected areas.

Teleconferences of the Fire Danger Rating Liaison Group were held on the Thursday 9 and Friday 10 January. The meeting on the Friday including additional delegates from functional area support groups to discuss the predicted severe fire weather conditions. At the teleconference the DFES Duty Assistant Commissioner provided an update on the DFES preparedness levels across the Regions and the Metropolitan area, including the Perth Hills, which was assessed at a Metropolitan preparedness forecast level of MEDIUM and was expected to move to HIGH for the weekend.

A Phase 2 pre-emptive activation of the DFES State Operations Centre and Metropolitan Operations Centre was activated by the Duty Assistant Commissioner on Saturday 11 January and continued into Sunday 12 January in response to the forecast weather
conditions advised by the Bureau of Meteorology. The State forecast level of preparedness was HIGH. State Operations Centre (SOC) staff, including Metropolitan Operational Centre (MOC) personnel, were rostered over the weekend, including additional Communication Centre personnel.

Prepositioning of aerial suppression resources for the duration of the adverse weather conditions were identified with assistance from DPaW. Due to the expected catastrophic fire conditions predicted in the Midwest Gascoyne area, two fixed wing aircraft were forward based in Dongara for deployment to assist in that area. There were a total of seven water bombing aircraft, including the Air Crane, available for deployment within the Metropolitan and Perth Hills areas.

All DFES Regions were requested to explore resourcing capabilities including the establishment of Incident Management Teams and the potential for Task Force deployment. This included the rostering of two Level 2 Incident Management Teams from staff and volunteers from Perth North and Perth South Regions.

DPaW confirmed that parks within the Perth Metropolitan area were to be closed for the weekend and that the Department’s operational capability was at full strength. Additional external plant and machinery contractors were identified and available.

WA Police confirmed that officers were available to assist with road closures, evacuations or control point requirements and to provide Liaison Officers for assignment to the State Operations Centre.

Total Fire Bans for large parts of Western Australia were applied over the weekend of 11 and 12 January, including the Perth Hills. The areas affected by the bans were the subject of a targeted and intense media campaign prior to the weekend.

The operational readiness is clearly a positive influence on the outcomes achieved.

6. THE FIRE

6.1 The Ignition

The bushfire was reported via Triple Zero to the DFES Communications Centre just prior to 1100hrs on 12 January. Initial and subsequent callers identified the area of origin as being near a power pole on private property. Under predetermined origin and cause investigation arrangements between DFES, WA Police, Energy Safety and Western Power, the fire scene was examined after the incident. No suspicious circumstances were identified by the investigators and the cause of the fire has been recorded as accidental by DFES. Both DFES and Energy Safety prepare formal fire investigation reports, however, these were not available at the time of writing this Report. In any event, the causes of the ignition are not included in the terms of reference of this Review.

6.2 Fire spread and chronology

The ignition point was adjacent to trees and grass and once ignition occurred the fire was driven by a west-north-westerly wind across pasture. By the time the first firefighting
crews arrived from Parkerville Bushfire Brigades and Kiara Career Fire and Rescue Brigade (Kiara were in Darlington at the time of the incident), the fire had spread and was running and spotting to a bridle track next to the creek line on Riley Road. Due to the fuel loads along the creek line the fire’s intensity increased dramatically at that point.

For the first 60 to 90 minutes, a combination of high fuel loads and weather conditions made the fire difficult to control even though significant ground and aerial resources were deployed.

Property losses were first reported to the Incident Controller at approximately 1315hrs. At one point, following a concerted effort by aircraft, the head of the fire was slowed, but unfortunately with a change in wind direction to the south west and an increase in the slope topography, the fire’s intensity increased. During the next two hours considerable property loss occurred as the fire travelled into Stoneville. Throughout this period ground crews employed Rural Urban Interface (RUI) firefighting tactics as one of a number of firefighting strategies, both offensive and defensive, in an effort to minimise losses.

Media reports following an interview with the FES Commissioner suggested that up to 450 properties in the area had been saved. This estimate was established using the Aurora fire modelling tool and Shire of Mundaring records.

Environmental conditions at the time of the fire are captured in the Keetch-Byram Drought Index (KBDI) for Bickley and Pearce (Appendix Four). This index indicates that the Forest fuel dryness factor for both sites was 10, indicating that both the woodland fine fuel and the grass fuel was 100% cured and therefore all available to burn. In addition to this fuel loading, strong winds with gusts, sloping terrain and houses built amongst the trees with limited access all contributed to very difficult firefighting conditions.

The fire line intensities calculated from these data indicate that the head fire could not be directly attacked with any certainty of success until after 2000hrs when the head fire intensity was predicted to drop below 2,000KW/m. Simulations developed at 1630hrs supported the prediction that the head fire intensity would be less than 2,000KW/m by around 2100hrs and at 2200hrs the forecast head fire rate of spread was predicted to be less than 400 m/hr. Intensity under 2,000KW/m allows for a direct attack. Together with the slowing rate of spread this provided two indications that successful suppression was possible by mid-evening. As weather conditions became more favourable for firefighting in the early evening and with the use of ground crews, aerial suppression aircraft and earth moving machinery, the fire was contained.

The fire’s path and the impact on properties is the subject of further analysis, which will be documented in a DFES Fire Behaviour, House Damage and Destruction Report. This report was being drafted at the time of writing.

The Bureau of Meteorology, Automatic Weather Station located at Bickley in the Perth Hills registered hourly weather observations and Grassland Fire Danger Index figures for the day, contained in the table below. A comparison of the information from the Bickley Weather Station and the spot weather forecast issued for Johnson Road Parkerville highlights the extreme conditions experienced in the area of the fire. The figures in the table below demonstrate the comparison at 1200hrs on 12 January.
Based on the Weather Station observations, the following Fire Danger Indices for Forest and Grass were experienced. The Grassland Fire Danger Index (GFDI) (averaged over 1 hour) peaked at 30 at Bickley between 1042hrs and 1057hrs, on and just following the wind change. A secondary peak of 29 occurred between 1355hrs and 1427hrs in west to south-west winds. Given the warmer conditions in Parkerville (compared to Bickley), the GFDI was estimated to have reached 30-40 on and just following the wind change and 30-40 in west to south-west winds following the change during the early afternoon.

The Forest Fire Danger Index (FFDI) (averaged over 1 hour) peaked at 53 (Severe) at Bickley between 1039hrs and 1059hrs with a secondary peak of 40 (Very High) between 1358hrs and 1407hrs. The FFDI is estimated to have peaked between 50 and 60 (Severe) at Parkerville on and just following the wind change with a secondary peak between 40 and 50 (Very High) during the early afternoon. A graph of the Grassland Fire Danger Index (GFDI) and the Forest Fire Danger Index (FFDI) for Bickley compares the two indices at Appendix Five.

The weather conditions reflected in these data, coupled with the 100% fuel load curing, accounts for the extreme fire behaviour experienced. It should be noted that under these conditions, only very well prepared and actively defended houses may offer protection or be saved.

The fire progression was plotted from a collation of aerial Forward Looking Infra-Red (FLIR) and situational reports from the fire ground during the incident. The final fire perimeter and area was compiled from the fire scar imagery following the fire, which revealed that the total burnt area was 386 hectares. During a field trip of the affected area by the Review team it was noted that where previous fire mitigation strategies had been identified and implemented, the progress and intensity of the fire had been reduced. This observation was confirmed by an overlay of fire scar and previous mitigation maps.

A detailed timeline of the events leading up to and throughout the period of the fire is found in Appendix Six.

### 6.3 Concurrent events

In the period leading up to the Parkerville Stoneville Mt Helena event there were 126 incidents logged within the DFES Computer Aided Despatch system at the Communication Centre at Cockburn. Five of the incidents which ran concurrently had heavy resource commitments. After the commencement of the Parkerville Stoneville Mt Helena bushfire there were another 58 incidents logged until midnight, of which another three required heavy resourcing. Concurrent incidents included:
10 January, 1546 hours: bushfire at Middle Swan (Incident 261364) involves 19 appliances and their crews in attendance for in excess of 14 hours;

11 January, 1153 hours: bushfire at Jolimont (Incident 261432) involves 51 appliances and their crews in attendance for in excess of 114 hours;

11 January, 1447 hours: bushfire at Boddington (Incident 261464) involves 51 appliances and their crews in attendance for in excess of 111 hours;

11 January, 1626 hours: bushfire at Whiteman (Incident 261480) involves 34 appliances and their crews in attendance for in excess of 13 hours;

12 January, 0219 hours: bushfire at Middle Swan (Incident 261550) involves 24 appliances and their crews in attendance for in excess of 27 hours;

12 January, 1046 hours: bushfire at Nowergup (Incident 261572) involves 30 appliances and their crews in attendance for in excess of 19 hours;

12 January, 1238 hours: bushfire at Baldivis (Incident 261588) involves 33 appliances and their crews in attendance for in excess of 89 hours;

12 January, 1538 hours: bushfire at Swan View (Incident 261620) involves 29 appliances and their crews in attendance for in excess of 86 hours;

12 January, 1548 hours: Hazmat incident at Canning Vale (Incident 261623) involves 16 appliances and their crews in attendance for in excess of 14 hours.

Some submissions questioned why the Chief Bush Fire Control Officer from the neighbouring local government was not utilised at the Parkerville Stoneville Mt Helena bushfire. The Review was able to establish from incident reports and logs that the Swan Chief Bush Fire Control Officer, along with several other key personnel, had been in attendance at incidents the night before and was under fatigue management.

7. THE RESPONSE

7.1 Attending the fire

At 1058hrs the DFES Communication Centre received a call via the Triple Zero line from a caller at 119 Johnson Road, Parkerville (Inc 261576) reporting a fire involving a tree and paddock in dry grass, approximately 50sqm in extent and threatening a home.

The DFES Communication Centre activated DFES SOP 1 – Mobilising, Predetermined Zone 2 response (this includes one DFES, one DPaW and one local government operational crew; two Helitacs and appropriate managers). Communication Centre also advised the DPaW Perth Hills Duty Officer of DFES SOP 1 – Mobilising, Zone 2 activation. It is normal for DFES to notify DPaW of fires within a zone 2 area as well as any fires on or adjacent to DPaW managed land which gives an early awareness to DPaW staff of incidents that they may be request or required to attend. DFES do not
however include notification to DPaW of all other bushfire incidents that DFES attend and this minimises the overall situational awareness for fire activity in the state by DPaW staff. The review team has been advised the two agencies are involved in the development of a web enabled fire notification system which will assist in addressing this.

First crews on the scene were from the Parkerville Bushfire Brigade followed shortly afterwards by the DFES Kiara Career Fire and Rescue brigade. Submissions to the Review suggested that there was an unnecessary time delay in mobilising of nearby resources, however records show that the Mundaring Chief Bush Fire Control Officer asked for further Mundaring appliances to be mobilised at 1106hrs while still en route to the incident. The DFES Communication Centre paged the additional resources and these crews began to arrive from 1116hrs. The Review found that mobilisation of local resources was not delayed however the system to mobilise resources from other local government areas is cumbersome and time delaying and a more efficient system of mobilising interagency support is required.

Opportunity for Improvement

All agencies engaged in bushfire response should develop expeditious procedures for the mobilisation of resources in support of other agencies.

Several submissions questioned the level of initial turnout and whether an enhanced mobilisation was deployed. The Review confirmed that in fact the enhanced Zone 2 mobilisation was deployed, but suggests for future events given the level of preplanning conducted in the lead up to the event and the expected weather conditions, a further enhancement of initial resources to any reported fire could have been implemented.

Opportunity for Improvement

Standard Operating Procedure 1 (Mobilisation Zone 2, Perth Hills area) should be reviewed to ensure that appropriate escalation triggers and levels of operational readiness are in place for any future incidents.

Many submissions to the Review expressed the view that some appliances that responded to the incident were inappropriate for the conditions experienced in the area. Much of this opinion comes from submissions with a particular focus on the four wheel drive operations of the incident. It was made obvious that each fire agency has a different focus of operations in their day to day activity which consequently leads to the use of varying specifications and capabilities for operational appliances. The Review confirmed that the mix of appliances from all agencies complemented the variety of operational strategies employed on the day, with many of these strategies running concurrently.

Submissions also claimed that appliances were tasked by Communication Centre directly to properties and not via the Incident Management Team. Investigation of incident documents and radio tapes fails to confirm any evidence of this, however at times appliances spoke through to the Communication Centre to relay messages to the Incident Management Team as they had experienced problems communicating with the Parkerville control. Later in the incident, as concurrent incidents started, the
Communication Centre redirected several appliances that were en route to Parkerville to attend the new incidents. Radio conversations confirm that these redirections were conducted in consultation with the Parkerville Incident Management Team.

The initial response coordination and incident management functions were undertaken by the local government Chief Bush Fire Control Officer and as the incident escalated suppression resources and incident management efforts were enhanced through the provision of DFES and DPaW resources and personnel. As the Incident Management Team evolved, the original Incident Controller from the Shire of Mundaring was maintained for his local knowledge and moved into the position of Operations Officer. The need for effective use of local knowledge has been identified in previous reviews and was again raised in several submissions to this Review. The Review acknowledges work already done by organisations to embrace the use of local knowledge and believe that it was used to varying degrees throughout this incident and Incident Controllers may need to be made more aware of the desirability of maximising the use of local knowledge.

The Incident Management Team was set up at the Parkerville Oval, situated just to the south-west of the ignition point, where a control centre and staging area was established.

At 1230hrs, approximately 90 minutes after the incident was first reported, a Section 13 Bush Fires Act 1954, transfer of control declaration was invoked, after which DFES became both the Hazard Management Authority and Controlling Agency for the incident.

At 1450hrs discussions were held between the Incident Controller, an Assistant Commissioner present at the incident and the Duty Assistant Commissioner positioned in the State Operations Centre when it was decided to escalate the incident and a Level 2 Incident Declaration was signed. During these discussions, and based on consideration of all the available information, it was determined that a Level 3 Incident Declaration was not warranted at that time. This decision was based on information including, but not limited to, forward projections for the following 24hrs indicating that the weather conditions (wind direction) would remain constant; there was no substantial critical infrastructure in the path; requests for firefighting resources were being met; abating conditions pointed to no escalation potential. It was also considered that the change in dynamics associated with the potential change of personnel accompanying a Level 3 Incident Declaration may be disruptive.

Incident level declaration was raised by some respondents who felt that a level three incident should have been declared. SEMP 4.1 outlines the procedures for incident level declaration and provides guidance on the criteria to assist in making incident level determinations. The criteria associated with Level 2 and Level 3 declarations are similar and do not give a clearly delineated, escalating set of criteria to guide decision making. While the satisfying of one or more criteria does not necessitate an automatic escalation to the next level, the process remains subjective. It is ultimately the responsibility of the Incident Controller to declare the level based on their assessment of the actual and potential impact.

The Level 2 determination notwithstanding, it is clear to the Review that the Incident Management Team remained under-resourced for a significant part of the initial response on the first day. One of the impacts of this deficiency was the quality of information being provided to the State Operations Centre through the Metropolitan Operations Centre.
During the preceding days of preparation, personnel that could fill Level 2 and Level 3 incident management teams were identified. The Review found however that these teams were not isolated together as a team for response. In the circumstances where there were multiple fires running concurrently on 11 and 12 January, key members of these pre-identified teams were deployed elsewhere and were not available at the commencement of the Parkerville Stoneville Mt Helena incident.

The incident retained Level 2 status until after the fire was controlled. It was downgraded by a Level 1 Declaration at 1836hrs on 15 January. The fire was finally classified as ‘blacked out’ on Saturday 1st February, 21 days after ignition.

Some submissions indicated that confusion arose from an inconsistency of Incident Management Team members. While the number and size of concurrently running incidents may have contributed to this situation, it is notable that during the course of the incident nine Section 13 Incident Controller appointments were made as a result of the turnover of Incident Management Team staff. The Review concludes that all efforts should be made to minimise such appointment and where possible the same Incident Management Team should be maintained throughout an incident subject to appropriate fatigue management. It was noted that DFES is currently investigating methods to achieve consistency of Incident Management Team members under its fatigue management policy.

**Opportunity for Improvement**

Future appointments to the role of Incident Controller should be limited to one for the entire duration of the incident, with nominated Deputy Incident Controllers to assist or ‘take charge’ in the Incident Controller’s absence. This measure will provide for a single point of responsibility and control for the incident and assist with any subsequent review or enquiry after the incident. If it is not possible to implement this proposal for liability reasons, the number of Incident Controllers should nevertheless be reduced to the minimum number possible.

### 7.2 Incident Management

A multi-agency Incident Management Team was put in place with crews employing strategies to contain the spread of fire and where possible prevent property loss and damage. During the incident DFES and DPaW joint aviation services achieved a level of operational activity not previously experienced by either agency.

During the course of the incident 211 appliances and more than 500 associated firefighting personnel were deployed in suppression activities. While it is clear that all involved in the fire fight were committed to ensuring that the community was protected and that life was preserved, there was somewhat understandable confusion during the initial stages of the incident as to the level of resources being deployed and the overarching control strategies.
Opportunity for improvement

All Western Australian fire agencies use a paper based (T Card) incident resource management system which is easily overrun in fast escalating incidents. Submissions to the review indicated that the joint development of an electronic Incident Resource Management System to be used across all agencies and linked to the Automatic Vehicle Location technology would increase the efficiency and safety of appliance management.

The Incident Management Team was established in accordance with Australasian Inter-Service Incident Management System (AIIMS) principles. This reflects recent improvements and is a measure of the appreciation by officers of the need for a structured incident management approach at such incidents. There were reports however of reversion to a rank structure in some situations. Submissions to the Review reported that some crews ignored or disregarded instructions from personnel within the AIIMS structure if these instructions were not from within their own organisation. These issues were reported as happening at the height of the fire when there was a degree of confusion and uncertainty as to what crews were designated to which operational sector. While it is apparent that a lot of work has gone into the interoperability of organisations including through joint training and exercising, and that improvements have occurred, it is clear that in pressured situations crews may revert to a familiar organisational structure. The Review supports all emergency services organisations continuing to conduct joint training and exercising, and the development of other strategies to improve the interoperability of crews.

In recent times both DFES and DPaW have employed the role of liaison officers at incidents managed by each other and the presence of the DPaW officer at the Parkerville Stoneville Mt Helena incident was considered essential for the situational awareness of DPaW crews. In its submission to the Review DPaW suggests that:

“The value of this position is significant enough for effective interagency cooperation, that the assignment of a liaison officer to interagency fires should be considered a mandatory requirement and adopted into the mobilisation arrangements of both agencies”.

The pre-emptive identification of Level 2 and Level 3 teams during preparation for this adverse fire weather period was seen as a positive. The value of this preparation was somewhat diminished due to a number of other incidents running immediately prior to and concurrently with the Parkerville Stoneville Mt Helena bushfire which drew heavily on available resources. Many components of the rostered Level 2 team and key support personnel had already been deployed elsewhere at the commencement of the Parkerville Stoneville Mt Helena bushfire, which created a resourcing issue at the incident from the earliest stages, and resulted in an under resourced Incident Management Team throughout the course of the event. These issues contributed to the reduction of accurate situation awareness and information flows to the State Operation Centre and the Metropolitan Operation Centre. The lack of a dedicated Intelligence role in an expanded Incident Management Team to improve situational awareness was also identified as an issue.

From a list of eight previously identified Incident Control Centres in the Perth Hills, the control centre and staging area was established at the Parkerville Oval Pavilion, situated...
just to the southwest of the ignition point. The selection of this particular centre proved to be problematic. The Review believes that while Parkerville Oval and Pavilion was the most suitable location for a staging area, it questions its suitability for an Incident Control Centre. While there was a large usable area for the staging functions, there was no pre-established structure containing the required infrastructure that would allow for the effective and efficient running of a control centre. For example, prior to the incident the Parkerville oval facility was not appropriately fitted with information technology infrastructure (including computer ports), phone lines or fixed radio capability. This lack of facilities hampered the information flow to incoming crews with many submissions confirming that the briefing of crews and the supply of appropriate Incident Action plan information including usable maps was minimal.

The facility provided limited shelter from the elements. The establishment and selection of a more suitable predetermined location could have aided the use of electronic technology and incident management tools, including the provision of maps, mapping support, detail and print maps. This would also have assisted in uploading field Incident Action Plans and Situation Reports.

**Opportunity for Improvement**

 Appropriately equipped Incident Control Centres should be identified and/or established throughout the Perth Hills to meet the requirements of a fully resourced Incident Management Team in future bushfire events.

This opportunity for improvement has also been identified in previous reviews and is part of an ongoing joint agency project. It was reported to the Review that identification and development of these centres is well under way.

As these Incident Control Centres are established and resourced it is accepted that there will remain areas without suitable facilities to accommodate a fully expanded Incident Management Team. DPaW utilises a self-contained, fully functional mobile communications facility including purpose built office facilities that are able to be transported to areas that lack suitable facilities available in order to establish a fully functional Incident Control Centre. The majority of this equipment is stored in Bunbury and Collie in the South West of the State with a smaller cache of logistics and portable offices stored in Wanneroo. During the southern fire season there are staff on 24hour standby for the deployment of this equipment and it is estimated to take six hours to be fully deployed and operational to the metropolitan area. In discussions with the review, DPaW management have confirmed this equipment being available for sharing.

Consideration should be given to requesting the use of this facility by all agencies.

At the time of this incident, the DFES Incident Control Vehicle which is fitted with much of the capability found to be deficient at the designated Incident Control Centre, was crewed and available for deployment. Had this appliance been used several of the information technology issues encountered during the incident may have been alleviated.

**7.3 Communications**

The topography in the Parkerville, Stoneville and Mt Helena area contributed to the communication difficulties experienced by the Incident Management Team in relaying the
firefighting strategies to crews in the early stages of the incident. The effect of the topography led to limited radio and mobile phone coverage within a clearly identifiable shadow area where the fire was burning. The allocation of the first communications plan was not appropriate but was rectified on arrival of the first brigade with local knowledge of communications in the area.

**Opportunity for Improvement**

Radio infrastructure in the Perth Hills should be reviewed to assess whether it is practicable and affordable for radio and/or mobile phone coverage to be improved to achieve better coverage across the area.

Reports of unknown 'outside' interference across the uncontrolled radio network and insufficiencies in the fire ground radio network added to the communication issues experienced on the day. An investigation of the interference recordings by DFES Communications Branch found the interference was caused by deliberate transmissions from an unknown, unauthorised user with a radio set that transmitted on DFES channel 238. Submissions to the Review also reported major congestion on the radio channels that were being used and difficulties in deciphering information being relayed via these channels.

After listening to recordings of radio traffic, the Review found that radio transmissions in the early and most intense period of the fire were chaotic. A number of contributing factors were identified:

- Use of terminology during this time was poor from both the control end and the fire ground. While the Incident Management Team paperwork clearly defines the sectors and the divisions, including the naming of them, there were obvious problems in sector identification during transmissions.

- Inconsistent naming conventions added to the misunderstandings. It is apparent that naming conventions require greater attention during the pre-planning phase of the event. The task force that was formed at and deployed from the Kiara fire station was referred to by six different names in the first two hours of its deployment and during this time there was also a reference to Kiara pump and light tanker being a task force which increased the chaos. Investigation of the recordings found that the officer on Kiara pump was questioned regarding resource commitments on his sector, despite the fact that he had not been designated as sector commander. The sector in question (November) was assigned to Stoneville light tanker who was subsequently re-tasked to assist with asset protection on another sector (Alpha). When the sector commander pointed out that he was sector commander November, and questioned if he was in fact to move, he was told that he had been given an instruction and should move urgently.

- The volume of traffic led to the use of network channels to get messages through when a response could not be received on the fire ground channels. Submissions suggested that the linking of the 6IP/6AR network was to blame for this traffic volume. While the Review agrees that on days when multiple incidents
are running it should be standard to split the 6IP/6AR link, the majority of radio traffic issues on the network on the day were due to crews from the fire ground using it instead of keeping to their fire ground channel.

- It was clear from the radio tapes that some crews self-deployed to areas as priorities changed and were then unable to communicate effectively, as they did not understand which sector or sector channel they were now working on.

- From the tapes of the radio traffic it is obvious that the control channel 238 was at times overwhelmed as it was being used by many crews on the fire ground instead of the sector channels through their sector commanders. This lack of radio discipline led to limited awareness as to who were the sector and divisional commanders, as the terms were used interchangeably, even though the roles are quite distinct.

The Review emphasises the importance of the adherence to well-developed communications plans.

The radio recordings confirm that at 1402hrs a request for a second Incident Control Vehicle to be mobilised for assistance in order to manage the volume and complexity of fire ground communication. A page went out for a second Incident Control Vehicle and the Kalamunda Incident Control Vehicle arrived at 1508hrs. Given the extensive radio traffic which contributed to communication issues, the attendance of this second Incident Control Vehicle to work in conjunction with the Mundaring Incident Control Vehicle improved the communications capability.

**Opportunity for Improvement**

Every effort should be made to enhance the ability of communications personnel to cope with fast moving and time critical fire events by providing and maintaining:

- Ongoing extensive communications training for both career and volunteer staff;

- Advanced vehicle capability for clear communication within areas of radio coverage dead spots; ability to receive Air intelligence live streaming and map production facilities as new technology becomes available and affordable;

- Deployment of multiple Incident Control Vehicles when required;

- All Incident Control Vehicles be given access to DFES Information Technology Systems.

There were also difficulties in communication between aircraft and the Ground Control, which limited the opportunity for these aerial assets to assist with establishing better operational awareness.
Opportunity for Improvement

The role of the Ground Controller should be reaffirmed in operational doctrine and reinforced in Incident Management Team training. During incidents involving aircraft a designated Ground Controller should be confirmed by the Incident Controller.

The radio and mobile phone coverage may have been improved by the deployment of a “Communication on Wheels” capability and/or portable radio repeaters.

This incident highlighted the necessity for decisive pre-emptive communication plans to be developed, which are explicit and embedded in pre-incident planning documents which are then provided to all personnel involved with an incident. The Review identifies that more work needs to be applied to training in radio procedure and in protocols which emphasise the need for strong radio discipline.

7.4 Tactics

The Review team acknowledges the emphasis placed on asset protection during the first afternoon of the incident. It is clear that the efforts of the firefighters involved resulted in a significant number of houses being saved. These firefighters initially included both career and volunteers from the Shire of Mundaring, DFES and DPaW. They were later supplemented by assistance received from other local governments.

It was clearly identified that the initial Divisional structure that was implemented by the Incident Controller and applied to the early stages had merit. It effectively created a northern (Division two) and a southern (Division one) separation. While the establishment of Divisions and Divisional Commanders was implemented, there was considerable uncertainty as to the extent of those Divisions and their associated Sectors, including the number of appliances attached to each Division. This was particularly the case early in the incident. As was evident from the communication tapes, many of the crews self-deployed and positioned themselves elsewhere as they identified new priorities, which made it impossible to maintain an accurate awareness of vehicle movements and placements within each sector. The Review feels that the lack of accurate information this creates is a major safety concern.

The use of Automatic Vehicle Location (AVL) technology would have provided a much greater appreciation of the appliances available on site and their location within the incident and as a consequence a far greater situational awareness. Submissions confirm that DPaW already have this technology operating across its fleet and are able to monitor resource disposition throughout the State. The Review was made aware that DFES also has this technology available and that it is used within the air operations and marine sections of DFES Submissions commented that if all operational vehicles were fitted with Automatic Vehicle Location technology, and a compatible tracking system employed across all agencies, the resource preparedness levels, incident situational awareness and general safety of crews would be greatly enhanced.

It is pleasing to note, therefore, that the government has already funded this safety initiative as part of the program of fitting crew protection to fire appliances and that roll-out has commenced.
Opportunity for Improvement

Automatic Vehicle Location technology should be adopted to enable a better appreciation of the deployment and location of appliances at an incident in order to increase situational awareness.

From fire modelling it was established that once the fire took hold, a direct attack on the head fire would not be safe. This restricted the initial tactics to parallel attacks along the flanks and defensive asset protection. It was not until the evening, with the diminishing conditions affecting the head fire, that a direct head fire attack was possible.

It was reported to the Review that the application of Rural Urban Interface (RUI) tactics were generally successful, however during some interviews and in several submissions concerns were expressed that the rigid application of street-based structural defence tactics restricted the effectiveness of the response in some situations. It was found by the Review that RUI was only one of many strategies that were employed during the incident. It is clear that at the height of the fire, when there were multiple structures under direct threat, many of the available crews had been tasked with asset protection. It appears that some crews without specific RUI training are of the opinion that this was a RUI strategy. While this period was definitely a defensive period, the RUI strategy had not been implemented at that time. When the RUI strategy was employed it was implemented in accordance with DFES Doctrine SOP 3.5.7 which identifies that RUI tactics should be conducted by a stand-alone force, which in this case was achieved by the development of a new division (Division Three) specifically tasked to conduct RUI firefighting. The doctrine for conducting RUI firefighting tactics is dependent on defending the structure, providing a quick mop up and moving on, which is substantially enhanced after the fire front has passed through, with the use of residents that stay to defend.

One submission reported that some structural crews had not been issued with Level 1 (Bushfire) Personal Protective Clothing and that their Level 2 (Structural) Personal Protective Clothing was inappropriate for the occasion, which resulted in some crews shedding Personal Protective Clothing. The Review established that all Structural crews are issued with Level 1 Personal Protective Clothing and even during RUI operations the Personal Protective Clothing dress matrix is for Level 1 to be worn.

The implementation of the new division, in conjunction with the variety of identified tactics employed by all other crews, saved many properties on the day.

7.5 Aerial Operations

As a consequence of the DFES SOP 1 – Mobilising, Zone 2 activation, the DFES State Air Desk notified the Communication Centre that two rotary aircraft, Helitac 671 and 672, were mobile to the incident at 1111hrs. By 1200hrs, the Air Attack Supervisor confirmed that there were two Helitacs, the Air Crane and two fixed wing bombers engaged in water bombing at that time. The deployment of aircraft was later enhanced with the addition of all available machines and resulted in the following aircraft performing simultaneously:

- 1 x Aerial Intelligence Helicopter
- 3 x Air Attack Supervisor Helicopters
• 1 x Air Attack Supervisor Fixed Wing
• 6 x 214B Helitac Helicopters
• 1 x S64E Aircrane Helicopter
• 4 x AT802 Single Engine Air Tanker Fixed Wing

It is reported that the operating environment and the number of aircraft (sixteen) involved made aerial suppression operations the most dangerous undertaken on the State’s behalf. The interoperability gained through the establishment of the joint air desk with DFES and DPaW contributed to the successful operation of such a large fleet of aircraft. The submission from DPaW confirms this point of view and states:

“This is considered to be a result of joint training and daily work familiarity for the officers involved. This familiarity has resulted in a common respect among these officers for each other’s capabilities and a shared vision and familiarity of air operations, their purpose and procedures”.

The Air Attack Supervisor also confirmed that the efforts of the water bombing aircraft did have a mitigating effect on the head fire at one point, however this opportunity was not able to be fully exploited due to the minimal fire ground resources in that location at the time. The DPaW submission to the Review highlighted the need to match ground firefighting resources and machinery in areas that water bombers are operating so as to maximise opportunities for consolidation. The difficulty experienced in contacting the Ground Controller during this period led to the assumption that there was no Ground Controller in place, which aggravated the situation. It appears that for a time the Ground Controller was monitoring the Air Intelligence channel instead of the Air Attack Supervisor. The Air Attack Supervisor contacted the State Air Desk to convey the difficulties being experienced at that time.

The effectiveness of water drops on the fire during this operation was questioned by several submissions and interviews. It was reported that it appeared aircraft at this incident were dropping loads from higher than had been experienced previously, diminishing their success. The complexity and safety concerns associated with so many aircraft in the same vicinity may have contributed to this outcome.

Issues with aerial communication were also highlighted by the Aerial Intelligence aircraft deployed to provide aerial photographic footage of the fire path and the progress of the fire. There was connectivity and radio communication back to the State Operation Centre and Metropolitan Operations Centre and the information being collected by the Aerial Intelligence aircraft, including fire perimeters and paths, was transmitted. However this level of detail was not accessible by the Incident Management Team due to the lack of infrastructure and connectivity at the Parkerville Oval.

The issue of all rotary aircraft operating from the one forward air base was identified as a risk. Glen Forrest oval would have been the ideal alternative had it not been for the level of aircraft traffic that would have been required to use it. Part of the operation included hot refuelling of the aircraft. In these circumstances the Review felt that there should have been appropriate fire protection in place at the base in the event of an aircraft-related fire.
Opportunity for Improvement

Procedures should be reviewed to address the risks associated with all response aircraft working from one forward air base, including the need for a designated fire protection unit to be available in the event of an aircraft-related fire or other emergency incident.

7.6 Heavy Plant Coordination & Management

During the course of the incident, heavy plant was engaged and was used to provide tracked fire breaks, primarily on the flanks of the fire. These machines included a DPaW loader and three privately contracted front end loaders.

It was reported that these machines could have been better managed as there was significant uncertainty and ambiguity over the tasking of the hired plant. The interrogation of the taped radio traffic confirmed that the machinery appeared to be working independently of the tasks that they had been given and at times were not achieving outcomes that would contribute to the overall objectives. It was reported that there was difficulty communicating with the hired machinery as they did not have compatible radio communications. Comment received by the Review indicated that the appointment of a Machinery Supervisor within the AIIMS structure could have avoided a breakdown of procedure in monitoring the use of plant. The use of Machinery Supervisors normally working under the Operations Officer is allowed for in the DFES doctrine D3.5 Bushfire and their responsibilities are set out in the Machinery Supervision learning manual. DPaW are very experienced in the use and management of heavy machinery at fires and have appropriately trained machinery supervisors attached to machinery crews on all occasions. The opportunity to conduct joint training in this area should be explored in order to increase the number and availability of machinery supervisors. Consideration should also be given to the appointment of a Machinery Supervisor whenever heavy plant is used to ensure that the equipment is being used to its fullest capacity.

The DPaW submission also identifies that the Department own a large number of heavy machines and supplements these with contract machines, while DFES use contractual arrangements with private operators. Most local governments are reluctant to release heavy machinery plant for use at fires. It is suggested that DFES and DPaW explore avenues for the joint negotiation of contracted machinery and consider joint operational procedures to streamline the mobilisation and use of this machinery. Such a system would be similar to the very successful joint air desk that is already in operation. It is also suggested that the feasibility of a state wide logistical register of available machinery including DPaW owned, privately contracted and Local Governments that are prepared to release equipment be investigated. Consideration of joint operational procedures to streamline the mobilisation and use of this machinery would increase the level of interoperability.
Opportunity for Improvement

Procedures should be established to monitor the use of heavy plant during a bushfire incident, including the tasking of support appliances. Procedures should provide for the appointment of a dedicated Machinery Supervisor.

7.7 Warnings

The first public warning was requested by the local government Chief Bush Fire Control Officer at 1131hrs. The assessment was for an Emergency Warning level fire for residents in the Parkerville area.

Simultaneously, the Media and Public Affairs Unit within the State Operations Centre was in the process of preparing a Watch and Act message (lower than Emergency Warning) for the Parkerville fire, based on the nationally agreed Warning and Alert Messaging Matrix.

At 1140hrs the Media and Public Affairs Unit was advised that the fire was assessed as requiring an Emergency Warning and the request was received for an Emergency Alert phone message and a Standard Emergency Warning Systems (SEWS) media message to be issued.

The SEWS message was issued at 1150hrs for the residents of Parkerville advising that for the eastern part of Parkerville residents were in danger and needed to act immediately to survive. It also stated that the alert level for this fire had been upgraded.

Fifty minutes elapsed from the first report of the fire to the time that the first warning was issued and this was at the highest level: Emergency Warning.

Opportunity for Improvement

Consideration should be given to an automatic ‘Advice’ notice being issued as soon as a fire is reported in a pre-determined high risk area such as the Darling Scarp.

The Emergency Alert message at Emergency Warning level issued at 1156hrs was designated as a tower local based area (LBA) message which means that it was received by 8186 mobile SMS services within the LBA footprint and 1113 valid fixed line services for voice messaging. This had the positive effect of notifying many people across a wide geographical area but also meant that there was an escalation of calls into the Triple Zero and 1300 657 209 Bushfire Information Line with callers seeking information regarding the fire. This potentially included communities that were at considerable distance from the fire. This issue should be a consideration in further use of the tower local based area message.

The actual messaging throughout the course of the incident was generally consistent but had mixed reactions from community members. A selection of comments by community members follow:
“The message [on the phone] was relayed very quickly and therefore I only heard part of the message”

“I didn’t receive a message on my mobile, nor did my partner …how do you get on the list of people to call?”

“We cannot commend DFES highly enough for the continual updates on the fire …the messages received on our mobile phones …”

“I received the emergency warning SMS at 3.45pm well after the time I would have needed to evacuate safely”

“Early warnings were brilliant”

“I was entrenched watching a movie with Wi-Fi headphones at the time of the fire and I didn’t know the fire was approaching.”

The DFES website is a critical source of information for the public during fires. The site had nearly 230,000 visitors generating 11 million hits during the fire, its largest recorded traffic volume to that date. It is interesting that there were claims that the website failed during the event. This claim is contradicted by DFES who are clear that, unlike in previous large events, the DFES website coped with the demands on it. This is due to a significant increase in its website bandwidth. DFES did acknowledge that despite the website remaining active it became very slow. The Review also received criticism from the community that the updating of relevant information and warnings was too slow to be of use.

Many instances were cited of residents using social media to send and receive information. A number people learned the fate of their homes from neighbours who were still in the fire area. Information with varying degrees of accuracy about the fire direction and road closures was swapped using social media. One Facebook page running out of Darlington reportedly had 3,000 people viewing it.

There is currently a large gap between the public’s expectations of immediate access to accurate and authoritative information during an event and what it is possible to deliver given limitations on the information available to the Incident Controller and the available technology. Public information needs in this incident related primarily to information about the direction and spread of the fire, road closures, property losses and when residents would be able to return home. The Review noted that much effort now goes into the provision of information by authorities in an environment where there is constant competition with social media, the users of which have lower standards of accuracy and accountability. It is likely that the gap in expectations may be lessened as authorities
increase their social media capabilities and better technology becomes available, but it will never be fully closed.

Given the number of messages distributed on the day the Media and Public Affairs Unit within the State Operations Centre did a good job in dealing with general media enquiries.

It was also evident that the early deployment of a DFES Public Liaison Officer to the incident provided the necessary advice and input to assist the Media and Public Affairs Unit to perform its role.

### Opportunities for Improvement

Consideration should be given to an automatic ‘Advice’ notice being issued as soon as a fire is reported in a pre-determined high risk area such as the Darling Scarp.

Training and awareness raising should be conducted to enhance the appreciation and understanding of all State, Regional and Incident Management personnel of the nationally adopted Bushfire Alert and Messaging Matrix, in order to ensure that all bushfire incidents are categorised with the most appropriate alert level and associated community messaging.

### 7.8 People who left

Meetings for affected communities before, during and after bushfires have become an expected and integral part of the management of a bushfire event. The conduct of these meetings is the responsibility of the Controlling Agency.

#### 7.8.1 Evacuation Centres

An evacuation centre was established at the Mundaring Recreation Centre at noon on Sunday 12 January. This decision was made by the Shire based on ease of access, despite a recommendation from CPFS that it be established at Brown Park Recreation Complex in Swan View. The Mundaring Recreation Centre proved to be too small and the facility was subsequently relocated to Brown Park. This facility remained the sole evacuation centre and later became the ‘recovery centre’ for the incident. On 21 January the recovery centre function was relocated to the Hub of the Hills Community Centre in Mundaring which was promoted as a ‘one stop shop’ for services to residents affected by the fire.

The relocation of the evacuation centre from the Mundaring Recreation Centre to Brown Park inconvenienced both evacuees and service providers. Some evacuees were still proceeding to the Mundaring Recreation Centre after it closed, while some had to register and apply for financial assistance twice. Changing evacuation centres fragmented the services provided by CPFS and required a doubling of resources when changing centres. It was also difficult to coordinate between the two centres while they were both being used. Some evacuees felt that there was a lack of timely information
coming into the centres about what was happening on the fire ground. The lack of information provides more opportunity to receive information from other sources, such as social media, which may not be accurate.

Some residents relocated to the homes of family or friends rather than to the evacuation centres and found it difficult to obtain information about the fire. Similar difficulties were encountered by others with homes in the fire zone but residing elsewhere however this did not seem to be a widespread issue.

Full consultation needs to occur with CPFS regarding the location of evacuation centres for the purposes of Westplan – Welfare, which requires that activation of evacuation centres is determined by the Local Welfare Coordinator in consultation with the Local Emergency Coordinator and the Hazard Management Agency or Controlling Agency.

**Opportunity for Improvement**

Relevant policies and Westplans should be amended to require that full consultation occurs between the Controlling Agency and the Department for Child Protection and Family Support regarding the location of the evacuation centre in a bushfire incident.

### 7.8.2 Registrations

Registration of evacuees commenced at the Mundaring Recreation Centre and continued at the Brown Park Recreation Centre. The Red Cross advised the Review that 1,386 people registered over the five days that the evacuation centres were open. CPFS found that the registration forms used to register evacuees were helpful as they were able to assist families with immediate enquiries and to use the information to assist police and DFES with searches for families. They also assisted the Department to provide follow-up services to families who had registered and then left the evacuation centre. There were, however, insufficient registration forms. Red Cross made 47 matches between residents and their family and friends.

### 7.8.3 Community Meetings

Community meetings commenced on Sunday 12 January, with meetings held at the Mundaring Recreation Centre at 5:00 pm and 5:30 pm and the Brown Park Recreation Centre at 7:00 pm. Meetings were held regularly over the first ten or eleven days after the fire commenced. Earlier meetings were attended by up to 500 people, with the number declining over time.

Many residents commented to the Review on the location and conduct of the community meetings. It seems that there was a lack of pre-planning for such meetings. Amongst other things, this resulted in disagreement about whether the responsibility for providing a suitable public address system rested with DFES as the Hazard Management Agency or with the Shire. The outcome was that, in the initial meetings of up to 500 people, many were unable to hear or see properly. This had the effect of frustrating those attending and presenting an unprofessional image. The situation improved as the Shire sourced and deployed more suitable audio visual equipment.
Given the likelihood that one or more bushfires each season will require people to evacuate or relocate and then require information on house loss, road blocks, re-entry, care of pets and the like, the Review considers that pre-planning for community meetings by the Hazard Management Agency should be done in as formal a manner as other aspects of incident management and be documented by a Standard Operating Procedure. Sample running sheets, notes for the person leading the meeting and training for people likely to undertake this role should be provided. Information sheets that can be prepared in advance, for example the Access Permit System, need to be ready for distribution. Audio visual equipment suitable for a large crowd needs to be part of the kit available to support each such meeting.

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DFES should prepare a Standard Operating Procedure for the conduct of community meetings and have available the appropriate audio visual and other equipment to ensure that community meetings are able to fulfil their function in providing information and direction.

The success of the initial and subsequent meetings is a key factor in the recovery of the community and in protecting the reputation of the authorities involved.

### 7.8.4 Media

While the media had entry to the community meetings they were asked to leave after the meetings concluded as the meetings were held in the evacuation centres. CPFS set up a meeting point for the media to talk to people outside the evacuation centre.

The Review heard that some media personnel entered the fire ground without authorisation and approached residents there. Others ignored instructions to leave the fire ground. These actions by the media endangered their own safety as well as the safety of others. The fact that the media were able to enter the fire ground was of particular concern for those residents who were not allowed back into the fire ground until later. Some residents reported seeing their damaged homes on the internet, on television or in the newspaper before being formally advised of their loss. This led to considerable anxiety and distress.

On 18 January DFES Media and Public Affairs wrote to Chiefs of Staff, News Directors, reporters and outlets of the Western Australian media to express concern that a number of media agencies ignored the Department’s instructions to not enter the fire ground and then instructions to leave the fire ground. At the time of writing, a briefing of Chiefs of Staff and News Directors about media access and behaviour during emergencies was being planned.

DFES provides journalists in Western Australia with annual training through the nationally recognised “Maintain Safety at a DFES Incident Scene” course. All media outlets are invited to attend the course, which is held just before the commencement of the high-risk bushfire and cyclone season.
7.8.5 Terminology

There is some confusion regarding the terms ‘evacuate’ and ‘relocate’ and consequently also the use of the terms ‘evacuation centre’ and ‘relocation centre’. In this report the terms “evacuate” and “evacuation centre” are used to be consistent with the terminology adopted by contributors to the Review. Although terminology conflict does not seem to have been a major issue for responders or residents in this incident, it could cause confusion during future major incidents. It is an issue that needs to be considered further to ensure that there is no confusion among responders and to facilitate the movement of people out of their homes.

7.8.6 Pets

The concern that people have for what is valuable to them cannot be overestimated. It is known to be a strong motivator for behaviour during and after a fire and no doubt affects recovery. Caring for pets was an issue at the evacuation centre, for those trying to return to their homes and those who stayed to defend. The service provided by the Shire Rangers in retrieving and caring for pets after the fire was appreciated. This included collecting and holding pets that had perished in the fire for residents to claim. The Shire also offered to dispose of perished pets. Volunteers, neighbours and others also cared for pets that were left behind at homes. For example, there is a significant equestrian community in the Shire and there was considerable cooperation between its members in agisting other peoples’ horses. There were some problems associated with people bringing pets to the evacuation centres including dogs fighting and lack of ready access to water.

A planning group called ‘Animals in Emergencies’, led by the Department of Agriculture and Food, is reviewing arrangements for the care of animals, including pets, livestock and wildlife, during an emergency. SEMC’s guide to developing local emergency management arrangements provides a template for the development of animal welfare support plans. While the Shire of Mundaring does not have such a plan, other local governments have these plans in place. All local governments should consider developing animal welfare support plans. Residents, such as stock owners, and companies, such as boarding kennels and vets, should also consider developing their own plans.

7.8.7 Emergency Contact Numbers

The Shire needed to contact residents in the early stages of the fire, but this proved difficult. Local governments could consider maintaining emergency contact lists for residents of the area and property owners who live elsewhere. While many people may not be willing to provide these details to their local government, the experience in the Parkerville Stoneville Mt Helena fire suggests that it would facilitate the location of people in an emergency.
7.8.9 Looting

Despite media speculation and social media reports regarding looting after the fire, the police had no formal reports of looting of homes in the fire ground. One resident reported to the Review that they had belongings stolen and there were reports of juveniles on bikes riding through the area taking property from unattended houses.

The Review was informed that a reason that reports of looting might not have been made to police because it would have been necessary to leave the fire area to do so. Residents would then not have been allowed back in. This concern was coupled with fear on the part of some residents that police would close tracks being used by looters who had used their local knowledge to enter. These same tracks were being used by locals to bypass the road blocks in order to access their homes.

7.9 People who stayed

The Review received strong representation about the issues faced by residents who stayed to defend their homes. Presumably some of these people found themselves staying with their houses out of circumstance rather than by choice, but there are many in the latter group. The Review was told that the number was estimated to be 150 people. It is acknowledged both by firefighters and Mundaring Shire that in this instance many of the residents who stayed were instrumental in protecting their own houses and, in some cases, those of their neighbours as well. There were also examples of residents with the right equipment effectively protecting areas of bush which helped stop the fire from spreading.

After the fire had passed, many residents who had stayed to defend chose to remain in their homes in order to patrol for lingering embers and because they knew that if they left they would not be allowed back through the road blocks until the area was deemed safe. Some subsequently ran into difficulties as they had limited or no supplies of water, food or essential medications. The Review learnt that a welfare group not part of the Local Emergency Management Plan, the Rapid Response Team, set up an operation at the Stoneville Hall from which supplies were distributed to residents who had remained in the ‘hot zone’. From information provided to the Review, it is evident that this service was used and appreciated by many who stayed. The presence of this group was not known to DFES for some time.

It was reported that there was an expectation from a number who stayed that services to support them would be provided by the authorities. In some circumstances this proved to be the case, although this was more likely to be the result of individual initiative than a coordinated response. Neither DFES nor Mundaring Shire appears to have contemplated this would be a role expected of them, or anyone else during such an event. One resident who made a submission stated:

“It appears that property owners who were well prepared and stay to defend their properties are punished for doing so”

Another said;
“This means that from now on I will store petrol at home to make sure I don’t lose power again”

The DFES Prepare.Act.Survive. publication assumes that once the fire front has passed residents who defended will leave. It does not address the issue of people staying in their home for at least several days afterwards without services. Publications to promote community preparedness used by other Australian fire services are similar to those of DFES. There is mention of the need to provide food and water for a period extending beyond the initial fire in the publication Checklist – Preparing your Survival Kit but is not included in the After the Fire publication which is targeted at those who have left and come back to their damaged / destroyed homes some time later.

It is possible that the experience of people successfully staying to defend their property in the Parkerville Stoneville Mt Helena fire will encourage others to stay and defend in future events. One of the welfare organisations involved in this event reported that those who defended were being regarded as ‘heroes’ in some quarters and that, following their example, others community members had been heard to say that if it happened again, they too would stay and defend.

It is recognised by the Review that active support for those who stayed to defend poses a dilemma for authorities who promote the message that leaving is the safest course of action in a bushfire. However, it is obvious that many are choosing to stay and defend and, while this is presented as a legitimate option for residents, and assistance is given to them to do this, there is also a responsibility to provide all the information that residents may need to prepare successfully to be self-sufficient and also to plan for how to support such residents practically after the fire has gone through. Consideration also needs to be given to the information needs of this group in the same way information needs of those outside the fire zone and gathering at the evacuation centre.

**Opportunity for Improvement**

The State Emergency Management Committee should clarify in policy the approach to providing support or services to people who stay to defend their homes, and identify the roles that the HMA and other agencies and organisations may have to adopt in capability planning, community engagement and information campaigns.

7.10 People who wanted to return

An issue consistently raised by those who provided submissions or were interviewed was access to the fire ground after the fire and the issue of traffic management (road blocks) in general. This was also a difficulty experienced in the Perth Hills Fire and Margaret River Fire and commented in the subsequent inquiries. It was also a feature of the 2012 Tasmanian fires and the 2009 Victorian fires.

At every major fire where people have left their homes or were not in their homes during the fire, the difficulty of allowing access to return becomes an issue for both residents and authorities. Home owners are often frantic to be allowed to see what, if any, damage
has occurred and to have the opportunity to protect the house from lingering embers. They also wish to check on the fate of pets not able to be evacuated and, on occasion, to be reunited with children who may have been at home without their parents. Such emotion sometimes leads to the risky behaviour of circumventing road blocks to gain access without authority. All of this was present at the Parkerville Stoneville Mt Helena Fire as was a perception that all sorts of people other than residents appeared to have access in and out of what was called ‘the hot zone’.

Balanced against this understandable need of the residents is the Controlling Agency’s responsibility to keep fighting the fire without hindrance or distraction and to make the area safe from fallen power lines, burning or compromised trees, exposed asbestos, hot ash beds and similar hazards.

Many comments received were highly critical of the difficulties in regaining access to the affected area:

“no common sense was used .. we were treated like idiots by the Police at road blocks”

“everyone including potential sightseers and looters could freely access the ‘black’ zone”

There was strong representation in submissions and interviews regarding the matter of local volunteer firefighters being stopped at the police vehicle checkpoints. Many volunteers and other residents argued that volunteers should be allowed access into the restricted area or ‘hot zone’ as they have the necessary skills and training to be personally safe and to assist in saving their own and possibly their neighbours’ homes.

The Review understands the dilemma but is not convinced that the IMT would have enough control of non-firefighting personnel moving around the fire ground. This is particularly true in the absence of a current system that identifies and authorises volunteers. The key issue is the need for the fire ground to have an absolute minimum number of vehicles other than fire trucks on the road, particularly private ones.

Volunteers attending in an official brigade capacity will either be entering the area in their fire truck or assembling at the staging area which is outside the fire ground.

The Review does agree that should volunteers need to access their firefighting protective clothing located at a fire station within the fire ground, a suitably safe arrangement should be managed by the Incident Management Team. The Incident Management Team should also be managing the rest and refreshments of local volunteers working on multiple shifts in the same manner that volunteers from more remote locations are managed. DFES, in consultation with bushfire volunteers should develop a procedure for the controlled entry and exit of volunteers to the fire ground.

On Tuesday 14 January, DFES initiated a temporary Restricted Access Permit System. This permit allowed for residents’ re-entry into areas deemed safe. Feedback from some indicated that this was a good initiative but response by waiting residents for permits overwhelmed the resources available to issue them thus resulting in a long queue of
frustrated angry people. Police at the Vehicle Check Points reported that they needed to read and recheck the permits thus frustrating residents more.

The Review is aware that following the 2011 Keelty Inquiry into the Perth Hills Bushfire, a multi-agency working group was established to consider a newly developed access system being introduced into Victoria. That working group determined that this system is not suitable for Western Australia.

This Review is not supportive of any proposal to attempt to create a data base of people who have pre-registered for a permit and particularly of seeking people to pre determine whether they would leave their home or stay and defend. Such a data base would be expensive to develop and maintain, need to overcome privacy issues, be unlikely to contain enough names to be worthwhile in any one localised event and require technology connections that are often unavailable in a disaster. Asking people to pre determine whether they would stay and defend or leave in the event of a bushfire possibly years in advance is contrary to the need to constantly assess conditions and the capability required to defend.

The Review considers that the permit arrangements instituted for the Parkerville Stoneville Mt Helena Fire have merit but that work should be undertaken immediately to refine the system including obtaining legal clarity around the liability of the Incident Controller. Any system must work on the two principles of safety and simplicity.

The Review noted that the terms ‘hot zone’ and ‘warm zone’ appeared to have been very easy for the residents to understand as they instinctively convey the intended message. The terms were used freely and appropriately in letters and conversations with residents and other organisations involved. Further consideration on an access permit scheme should consider keeping these terms.

It is also suggested that the basics of the agreed system be included in information material aimed at community preparedness and be available at the initial and subsequent community meetings as an information or ‘fact’ sheet. This is to try and alleviate some of the initial pressure from the community about how they will get back in. The use of video footage from a previous fire and preferably one in a different State could be useful in demonstrating to residents the likely conditions and manifest dangers in the ‘hot zone’ and why re-entry has to be so carefully managed. Such footage can be pre prepared should be a priority to show at community meetings at the first possible opportunity.

The Review believes that because of the levels of uncertainty and emotions present at all disasters, a high level of anger and frustration will always be present within the affected public. The aim is to have a process that will reduce rather than eradicate this issue.

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**Opportunity for Improvement**

A Restricted Access Permit system for the entry/ re-entry of residents, based on the one developed for the Parkerville Stoneville Mt Helena bushfire, should be finalised.

DFES, in consultation with bushfire volunteers should develop a procedure for the controlled entry and exit of volunteers to the fire ground.
8. THE RECOVERY

8.1 Transition Response to Recovery / Handover to Local Government

The recovery process for the Parkerville Stoneville Mt Helena bushfire is ongoing. However, it is possible to say that the early stages, including the critical period during which recovery efforts coincided with the event response, generally went well.

The Review noted that there was some confusion and delay around the transition from response to recovery and the handover of control of the incident. The terminology used in policy and planning documents to describe the transition in an event such as the Parkerville Stoneville Mt Helena bushfire is unclear, particularly as recovery starts soon after response commences and the two processes run concurrently for some time. This caused confusion for the Shire of Mundaring. Consideration of the appropriate wording regarding handing over the control of an incident needs to occur in respect to Westplan – Recovery Coordination and State Emergency Management Policy No. 4.4 – Recovery Coordination.

A ‘system map’ could be of value to clarify roles and responsibilities in handing over an incident from a Controlling Agency to a local government. System maps outline the steps to be taken in a process, the critical success factors for each step, the skills and resources required, and identify the lead organisation.

Principles and criteria should be specified to help determine the best time to hand over control of an incident. Handover should only occur when the major hazards on the fire ground have been mitigated and a local government has the information, resources and skills needed to take over control. In the Shire of Mundaring’s view, the impact and needs assessment initially prepared by DFES contained insufficient information to inform the Shire of the impact of the fire on the community and the resources that would be needed for it to take control. Following its first draft of a handover document, DFES was asked to provide further detail regarding these assessments.

The local government also needs to be aware of the risks, the extent of damage and the strategies identified and available to minimise risks before signing and accepting handover of the incident. Templates should be provided to assist. The local government also needs to be aware beforehand of what information it should expect to receive. Completing handover documents in consultation with the local government would ensure that it has all the information it needs. The Review also noted that it is unclear from Westplan – Recovery Coordination whether the impact and needs assessments are intended to be one document or two.

State Recovery Controller is a new position that was incorporated into the State Emergency Management Policy No. 4.4 – Recovery Coordination in September 2013 and the interim Westplan - Recovery Coordination in December 2013. The incumbent was appointed from 1 January 2014. The interim Westplan - Recovery Coordination states that the roles of the State Recovery Controller include:

- liaise with the local recovery coordinator for any emergency to ensure local recovery arrangements are established;
- oversee the collection, collation and distribution of impact/damage assessments for recovery purposes and reporting to the Minister for Emergency Services;

- oversee the handover of recovery from the Controlling Agency to the relevant local government;

- liaise with and support the Local Recovery Coordinator in relation to the recovery process;

- monitor and report on the progress of recovery activities including preparedness.

The newly-appointed State Recovery Controller took an active role in the recovery process, liaising, coordinating or providing advice in relation to a number of matters including the transition, financial and other assistance, insurance and clean-up arrangements. This work was of particular value to the Shire. In accordance with the provisions of SEMP 4.4, the State Recovery Controller also formally advised the State Emergency Coordinator that a State Recovery Coordination Group would not be established. In addition to attending incident management, support and recovery meetings, the State Recovery Controller liaised with a range of organisations including State and Commonwealth Government agencies, utilities, the Shire of Mundaring and the Insurance Council of Australia.

It appears that DFES staff and other players were not aware of the creation of the State Recovery Controller position and did not understand the role. This caused uncertainty and delay; for example, when the Department was requested to provide more information in the impact and needs assessment.

As noted above, the Westplan and SEMP 4.4 specify that the role of the State Recovery Controller includes to oversee the collection, collation and distribution of impact/damage assessments and oversee the handover of recovery from the Controlling Agency to the relevant local government. It is not clear what ‘oversee’ means in this context; for example, does it mean to approve or just to monitor? The title “Controller” may need to be reviewed to reflect more accurately its roles and responsibilities. Addressing these issues could help to reduce confusion about the role of the State Recovery Controller.

**Opportunities for Improvement**

SEMP 4.4 and Westplan – Recovery Coordination should be amended to:

- clarify the wording around handing over control of the incident from the Controlling Agency to local government and the transition from response to recovery;

- include principles and criteria that will assist the Controlling Agency and local government to determine the best time to effect a hand over of control of the incident;

- make explicit the roles and responsibilities of the parties involved in the handover of control of the incident;
- specify the information required in the needs and impact assessments provided to local government by the Controlling Agency so that local government is given sufficient information to take control of incidents;

- clarify the roles, responsibilities and the title of the State Recovery Controller and ensure that the appropriate wording is reflected in Westplans and State Emergency Management Policies.

Hazard Management agencies, combat and support agencies and local governments need to fully inform themselves of the role of the State Recovery Controller and implement a more effective approach to communicating internally the changes or additions to Westplans, State Emergency management policies or procedures adopted by the SEMC.

### 8.2 Financial and Community Support

#### 8.2.1 Financial Support

The State and Federal Governments were quick to announce a number of financial support measures for those affected by the fire. Payments to residents commenced promptly.

On 13 January 2014 the State Government announced a Bushfire Emergency Relief Payment of $3,000 for those who had lost their homes and $1,000 for those whose homes were damaged but still habitable. The Government also announced on 13 January that it would donate $1 million to the Lord Mayor's Distress Relief Fund, which is administered by an independent Board and supported by the City of Perth.

The fire was proclaimed an ‘eligible disaster’ under the Western Australia Natural Disaster Relief and Recovery Arrangements. Through these arrangements the State Government provided immediate financial assistance to those people affected by the fire through joint State and Commonwealth disaster relief and recovery arrangements.

On 16 January, following negotiations between the Department of the Premier and Cabinet (DPC) and the Federal Attorney General’s Department, the State and Federal Governments announced that they had agreed to fund clean-up costs jointly through the Western Australia Natural Disaster Relief and Recovery Arrangements. DPC and DFES, following consultation with the Tasmanian Department of Premier and Cabinet, jointly developed criteria for the payments, with subsequent issues quickly addressed by the two departments.

DPC also requested the Department of Local Government and Communities to liaise with the Shire regarding emergency arrangements that may be invoked to assist in the coordination of demolition and debris removal services, including for contaminated sites, by appropriately licensed persons. The Review noted that a template contract would have made the contracting process quicker.
The Federal Government invoked the Australian Government Disaster Recovery Payment of $1,000 per adult and $400 for each child under the age of 16 years, to be paid through Centrelink.

The Shire coordinated the payment of financial assistance, including the Bushfire Emergency Relief Payments and clean-up payments. The Shire also liaised with the Salvation Army, Rotary and Lions Australia, which each conducted their own appeals for people affected by the fire.

The Finance Sub-committee of the Local Recovery Coordinating Committee received and assessed claims for financial assistance from individuals making application to the Lord Mayor’s Distress Relief Fund.

There has been positive feedback in relation to the work of the Shire in coordinating financial assistance. However, a number of concerns were expressed by the Shire about arrangements that it was required to coordinate or administer. In respect of the Lord Mayor’s Distress Relief Fund, the Shire was not clear about the respective roles of the Shire and the Board of the Fund, and the eligibility for assistance. In consultation with the Board, local governments are able to amend the wording in the application form, including the criteria for assistance. SEMC Secretariat Community Emergency Management Officers and DPC assist local governments with this process and provide examples of the application forms used by other local governments.

The Shire’s learnings from its experience with the fire could be included in the toolbox that the Community Emergency Management Officers make available to assist local governments in recovery.

As Westplan – Recovery Coordination requires cash donations from public appeals to be directed to the Lord Mayor’s Distress Relief Fund, support organisations have in the past been encouraged to put the money they raise into the Fund. However, private support organisations cannot be compelled to do likewise.

In addition, inconsistencies between the criteria applied by the different support organisations providing financial assistance caused confusion among some applicants.

Some of the residents affected by the fire did not seem to be aware of the range of financial assistance measures available. There was concern regarding the large number of forms that residents have to complete, often requiring the same or similar information.

A significant amount of work was required from the Shire in dealing with the various support organisations; for example, checking applications and sending out cheques.

To achieve efficiencies in the management of appeal funds and reduce duplication, software could be developed which outlines the range of financial assistance available, includes relevant templates and application forms, and does not require multiple applications to be made. Privacy issues would need to considered in the design of such software.
Opportunities for Improvement
Consultation with the Board of the Lord Mayor’s Distress Relief Fund and other disaster appeal organisers should be undertaken to determine the potential for software development including provision of relevant templates and application forms, in order to consolidate the application and approval process,

A template contract should be developed for the clean-up of affected properties, to speed-up the process.

8.2.2 Other Support

Westplan – Welfare prescribes the arrangements for the provision of welfare support during emergencies. The Local Welfare Committee is part of the local emergency management arrangements and meets twice each year. The Committee has been valuable in assisting with the clarification of roles and responsibilities during an emergency.

The State Welfare Emergency Committee has been in operation for many years and has contributed to a good understanding of roles and responsibilities and better integration of service deliverers. The Committee oversees and assists in the operation of Westplan – Registration and Reunification. It provides training, including the State Welfare Emergency Exercise Training Package and conducts de-briefs after incidents.

In general, there was significant positive feedback regarding the work of the welfare agencies.

The Red Cross had 122 staff and volunteers on the ground at some point during the incident. They conducted outreach through a doorknock to provide personal support and information, and to undertake a needs assessment. They visited 470 homes over five weekends. A follow-up survey will be conducted after six months and then another leading into the next bushfire season.

Volunteering WA manage volunteers during an emergency. They operated a call centre that dealt with volunteers and donations. Some callers did not understand the different roles of Volunteering WA and the Red Cross State Inquiry Centre from which Red Cross run the Register Find Reunite program. During an emergency there are different phone numbers for the various responders and support agencies. This can cause difficulties for callers, who often call the wrong organisation.

Between 13 and 17 January a previously unknown support group, the Rapid Response Team, used a team of more than 100 volunteers each day to provide 24 hour assistance to evacuees, fire fighters, staff and visitors. The assistance included the provision of food, water, fuel, use of generators and other supplies. The group operated from the Brown Park Recreation Centre and the Stoneville Hall, which was in the fire ground. It was reported to the review team that children were involved in their activities and this is somewhat concerning in terms of potential exposure to danger. On the other hand, significant positive feedback was provided to the Review Team about the support provided by the Rapid Response Team. Following the fire, CPFS is seeking to enter into
a Memorandum of Understanding with the group in order to bring its operations into line with policies and procedures governing welfare provision in emergency situations.

Youth Care, a multi-denominational Christian organisation providing chaplaincy services, was acknowledged to have provided valuable personal support to those affected by the fire. While a member of the State Welfare Emergency Committee and a participant in previous recovery exercises, the Parkerville Stoneville Mt Helena fire was the first emergency in which the organisation has been directly involved.

Unsolicited donations of prepared food were contributed by community members. However, these donations were not able to be accepted due to stringent food handling requirements. Many unsolicited household and clothing items were delivered to the evacuation centres. While the goodwill was greatly appreciated, the staff and volunteers working on welfare needs had great difficulty dealing with the volume of goods. Volunteering WA arranged for all donated goods to be boxed and relocated to the nearby Salvation Army shop for allocation to residents as needed. More effective ways need to be identified to provide consistent messages to the community that the most useful way to support people affected by emergency events is through cash donations to the Lord Mayor’s Distress Relief Fund.

<table>
<thead>
<tr>
<th>Opportunity for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultation with agencies and organisations that are engaged in emergency welfare provision is required to identify more effective ways to provide consistent messages to the community that non-cash donations are not required.</td>
</tr>
</tbody>
</table>

8.2.3 Insurance

There has generally been positive feedback regarding the handling of insurance issues.

The Insurance Council of Australia declared the fire an ‘Insurance Catastrophe’ which resulted in the Council coordinating the industry response to the incident, collecting relevant data, setting up an 1800 Insurance Assist Hotline and providing relevant information to householders. The RAC and SGIO insurance companies attended community meetings; this action was received positively. Information booths were also set up at the Brown Park evacuation centre.

The State Recovery Controller and DPC played a significant role in liaising with the Insurance Council to address issues that arose. For example, following discussions with the Insurance Council, it confirmed that clean-up costs for which property owners had received Government assistance would not be deducted from the payouts by insurance companies.

The value of people’s sheds was also raised by residents. Although it is the residence that is the focus for protection, it is often the shed that contains stored things of value. Examples were photographs, children’s early school work and materials for hobbies and businesses. Residents need to ensure that their policies cover sheds and other outbuildings containing items of value.
An issue that emerged during this event was that, once an insurer settles a property claim based on total loss (full insured sum), public liability is the responsibility of the home/property owner. However, public liability remains an issue as risks remain on fire damaged property, for example asbestos or seemingly sound trees casting branches or falling over.

8.2.4 Advising people who lost their homes

The process for advising people who lost their homes in the fire was undertaken by DFES, CPFS and the Shire of Mundaring. The arrangements were generally regarded as having worked well and as a significant improvement on the situation at the Roleystone/Kelmscott fires of 2011. A separate location was provided and the professional support of counsellors and social workers was available. Some families were upset at finding out about damage to their homes through the news and social media before being formally advised. Some residents felt that the waiting time to find out what happened to their homes was too long.

8.2.5 Vulnerable People

Fortunately no schools, nursing homes or other facilities that accommodate vulnerable people were affected by the fire. Vulnerable people and families were provided for by CPFS and other support organisations. DFES, police and others assisted some community members by taking medications into the fire zone. There were no major issues reported.

Westplan – Registration and Reunification requires that “special needs groups must be considered and included in State and local plans”. It is important for utilities to know in the early stages of an incident about the presence and needs of vulnerable community members. Recovery Committee meetings are helpful in this regard.

It was noted that within the area affected by the fire there were numbers of households which included ‘fly in fly out’ workers, which had the potential to increase vulnerability when such partners are away.

8.3 Utilities Recovery and Repair

Discussions by the Review team with representatives from the Water Corporation, Western Power and Telstra highlighted the fact that, as a result of the personal relationships developed through various forums, the utilities work well together during major bushfires. This was demonstrated at the Parkerville Stoneville Mt Helena fire. Some of the forums attended by these utilities include Local and District Emergency Management Committees; the Essential Services Network Operations Reference Group (a Subcommittee of the State Emergency Management Committee); the annual Darling Escarpment Water Strategy briefing; the Fire Danger Rating Liaison Group; presentations to Bush Fire Brigades and fire incident exercises.

Water Corporation, Western Power and Telstra generally received sufficient information, and in a timely manner, through the incident management arrangements established for the Parkerville Stoneville Mt Helena fire. This enabled them to ascertain what was
happening on the fire ground and assess the likely impact on their networks. Given the necessary safety requirements, the utilities received good support from DFES and WA Police to get access to the fire ground as soon as possible to assess the damage and begin service restoration.

It is important for utilities to know in the early stages of an incident about the presence of critical assets or vulnerable communities that may require priority attention. Local Recovery Coordination Committee meetings were helpful in this regard. For example, the Stoneville shops and liquor store were seen as a priority and were provided with a generator as power restoration was not available immediately.

Radio communications between the utilities and between incident responders and the utilities is important. The Parkerville fire demonstrated that problems continue to arise in this area.

Damage to Western Power’s network was extensive. Western Power workers were given access to the fire ground once it was considered safe on Monday 13 January. This enabled an assessment of the damage to be done so that reconnections could commence. On Tuesday 14 January eight crews commenced and on Wednesday 32 crews commenced. Western Power’s initial priority is always to make the fire ground safe for fire fighters, Water Corporation workers and critical assets. Western Power had a Community Engagement Caravan at the Brown Park Recreation Centre. There was a great deal of positive feedback from residents about how quickly Western Power was able to reconnect power. It was noted by the Review that the absence of residents in the most affected area contributed to the speed with which Western Power was able to effect repairs to its network.

Water Corporation staff were deployed to the fire at around 14:00 on Sunday 12 January, remained there for 48 hours and were later available to attend on an on-call priority basis. While water meters were damaged, there was no major damage to critical infrastructure. On Monday 13 January there was a team of people available to take calls on 13 13 85. There were also administrative support staff at the evacuation centres to assist with financial and concessional support packages for affected residents and property owners. Where possible, the Water Corporation also assisted non-scheme residents. On Sunday 12 January and Monday 13 January, the Water Corporation provided two pallets a day of bottled water to evacuation centres and response and recovery staff, with a total of approximately 14 pallets provided over the period of the incident.

Telstra was escorted into the fire ground on Tuesday 14 January and obtained sufficient information on the damage to order equipment. Initial inspections revealed that approximately six km of aerial cable and poles needed to be replaced. Some replacement stock had to be ordered from the Eastern States. There was damage to underground cabling, but no damage to infrastructure. Telstra is not classified as an emergency service so it does not have priority access to the fire ground and must wait until it is safe to enter. Unrestricted access was allowed on Friday 14 January and work commenced on 18 and 19 January. Telstra set up a table at the Brown Park evacuation centre from Monday 13 January where residents could receive assistance from Telstra staff. Services provided included free phone and Wi-Fi services, redirection of landlines, mobile phones with credit and phone charging services. Residents could also phone 132
203 to report faults and/or register for an assistance package. One week after the fire started, Telstra had received over 100 calls regarding faults. Where possible, Telstra also assisted those who were customers of other carriers.

9. OTHER RELEVANT MATTERS

9.1 Total Fire Bans

It was noted during the Review that Total Fire Bans are a relatively new initiative in Western Australia, having only been introduced during the 2009/10 southern bushfire season. The Review noted the need for ongoing education strategies to be developed and implemented, in order to inform the public about the meaning, implications and consequences of a Total Fire Ban declaration.

It was also noted that the processes for implementing a Total Fire Ban are not consistently developed and/or applied across the State and rely on a repetitive consultation and decision making process between DFES regional staff and local governments when dangerous fire weather conditions are forecast. A system to automate the implementation of Total Fire Bans, using all available fire weather and fuel load data, needs to be considered a high priority to streamline the process.

9.2 Private Fire Appliances

It is acknowledged that several private fire appliances made a considerable contribution to the firefighting effort at the Parkerville Stoneville Mt Helena bushfire. The use of such resources is to be encouraged. DFES publishes a Guidelines for “Operating Private Equipment at Fires” booklet which encourages safe and accountable use of private appliances. The publication provide guidance on the level of knowledge and personal protection required to work in an environment such as a fire, including basic fire awareness.

It is desirable that private operators register their intention to assist prior to an emergency, in order to avoid ambiguities that can arise on the day during an incident. There is currently a process in place which identifies private vehicles in advance and allows appropriately equipped vehicles to be issued with a Vehicle Identification Sticker which allows them to access a restricted fire area. Vehicle Identification Stickers are supplied by DFES but issued by the relevant local government. Most of the participation in this scheme is within local government areas in the southwest of the State, but the program is available to all those who wish to participate.

9.3 Naming Conventions

The review found that naming conventions employed when preparing to deploy task force resources prior to an event requires consideration of other resources that may be deployed and the establishment of a clearly defined name for the resource. During the Parkerville Stoneville Mt Helena bushfire there were four task force deployments with the first task force to be mobilised causing considerable confusion amongst both crews on the ground and the Incident Management Team via the Incident Control Vehicle.
Good work was conducted in the lead up to this incident with the preparation of a task force in the north metropolitan area and one in the south metropolitan area ready for immediate response to any major incident. The major issue arose from the north metropolitan task force being formed at the Kiara fire station. In the first two hours of this task force being deployed it was referred to by six different names as was evident on the radio message recordings. To compound this issue, the first arriving Career Fire and Rescue Service appliance was the Kiara pump and tanker which was also referred to at one stage in the incident as the Kiara Task Force.

Other naming convention issues identified were the identification by the radio operators of the sectors and divisions by the same name, Alpha and November when the Divisions had been named division one and division two. This mix up lead to questions as to who exactly were the sector commanders and who were the divisional commanders as some had been referred to as both.

9.4 Petrol Powered Pump Motors

Many of the submissions and interviewees expressed safety concerns arising from the use of petrol powered pump motors at the Parkerville Stoneville Mt Helena fire and other incidents.

Concerns centre on the pump motors fitted to the firefighting appliances. Apart from the obvious issues surrounding the refuelling of these motors with highly flammable fuel, it was also indicated that several motors had operating problems.

Diesel has significantly lower ignition and vaporisation points than petrol. It was reported that in the extreme conditions experienced in this event that several pump motors failed when the petrol in the fuel system vaporised.

While the risks of refuelling petrol motors at extended duration fires can be minimised using administrative procedures to remove the vehicle to a safer place, it was also suggested that a process which included refuelling away from the hot zone may in some cases cause undue delays in mitigating the fire.

Administrative measures however cannot overcome the performance issues of the pump motors in extreme conditions and will need to be resolved in other ways. The Review was made aware of the project underway by DFES to introduce a diesel powered pump motor on live drive appliances and to drive the crew protection sprays in the bushfire appliance fleet.
10. CONCLUSION

Bushfires are a constant presence in the Australian landscape. Whether arising from natural events or human actions, bushfires can have devastating consequences for communities, particularly those located outside major urban centres or in the rural urban interface.

The Parkerville Stoneville Mt Helena bushfire was in many ways typical of this kind of event. The fire also demonstrated that over time the Australian community has learnt to recognise and prepare for the bushfire threat. The Review found that in this instance State and local authorities and the general community were aware of the risk and had in place measures to mitigate the losses.

Bushfire preparedness was shown in this event to have operated on both long and short term time scales: in the long term, through strategies such as ongoing fuel load reduction on public lands; community education; support for volunteer fire brigades and individual preparedness at the household level. In a much shorter time frame, State and local authorities deployed assets, activated procedures and marshalled human resources in response to the severe fire weather conditions that would be experienced on the weekend of 12 and 13 January, 2014. After the fire passed, it was apparent that the recovery process benefitted from longer term planning and forethought and the willingness to learn from previous experiences in other locations.

Reviews such as this not only need to document developments but to anticipate future changes and propose practical improvements in processes and procedures. The value of this post event review is that it demonstrated that many activities went well and others provide an opportunity for improvement. These opportunities, based on the learnings emanating from the review with a continuous learning rationale, will benefit the participating agencies and all other stakeholders by consolidating knowledge and strengthening preparedness.

In conducting this review, SEMC and partner agencies very much appreciate the input from professional fire practitioners, policy specialists and administrators as well as community members, volunteer and career firefighters and staff from other State and non-government organisations. The impetus this input provides for continuous learning and improvement will continue to improve our ability to prepare for emergencies.
11. Appendices

Appendix One -- Terms of Reference

The intent of this review is to understand the aspects of the event that worked well and should be built on and highlight any issues that can be improved upon. The review is to address the following:

1. Understand and document the context of the incident including timing, conditions, resources available and any other concurrent incidents which may have impacted on response.

2. The effectiveness of the response by agencies, incident management, public information, and suppression strategies and tactics during the fire.

3. The effectiveness of recent SEMC approved changes to policies, plans and associated agency procedures at incident, operational and strategic levels.

4. The effectiveness of relevant legislation such as the Bush Fires Act 1954 and the Emergency Management Act 2005.

5. The effectiveness of associated activities across Prevention, Preparedness, Response and Recovery (PPRR) and any other relevant matters.

6. Comment on the improvements proposed as arising from the review and any other factors to improve effectiveness of PPRR.

Appendix Two -- The Full Review Team

Phil Cribb AFSM, Chief Superintendent, Department of Fire and Emergency Services

Ron de Blank, Principal Policy Officer, Department of the Premier and Cabinet

Ron Couacaud, Project Administrator, SEMC Secretariat

Naomi Brown, Consultant, NP Brown Consulting

Stuart Gunning, Manager Community Emergency Management, SEMC Secretariat

Mick Jose, Superintendent, Department of Fire and Emergency Services

Grant Pelton, Director Regional Coordination, Partnerships & Stewardship Group Department of Environment, Water & Natural Resources (South Australia)

Steve Yorke AFSM, Assistant Commissioner, Group Manager, Response and Coordination, NSW Rural Fire Service
### Appendix Three – List of Interviewees

<table>
<thead>
<tr>
<th>Date</th>
<th>Interviewee(s)</th>
<th>Organisation</th>
</tr>
</thead>
</table>
| **12, 14 & 28 February** | A/Superintendent Sid Bignell  
Superintendent Craig Walters  
District Officer Gavin Eva  
District Officer Geoff Roberts | Department of Fire and Emergency Services – members of the Incident Management Control Team  
(not all officers available on same day)                                                                 |
| **25 February**    | Superintendent Stuart Wade  
District Officer, Brett Findlay  
Community Emergency Services Manager, Mark Casotti | Department of Fire and Emergency Services / Shire of Mundaring                                                                 |
| **25 & 28 February** | Superintendent Stuart Wade | Department of Fire and Emergency Services -- Community Liaison (at relocation centres Mundaring) |
| **10 March**       | Jennifer Pidgeon                                                            | Department of Fire and Emergency Services -- Community Engagement Unit                            |
| **11 March**       | Mark Casotti (CESM & CBFCO)  
Dave King                     | Shire of Mundaring  
Chief and Deputy Chief Bush Fire Control Officers respectively                                  |
| **11 March**       | Jonathan Throssell  
Kaye Abel  
Adrian Dyson                  | Shire of Mundaring – CEO, Manager Community Engagement and Manager Health and Community Safety Services respectively |
| **11 March**       | Adam Bannister  
Derek Parks  
Peter Saint                  | Department of Fire and Emergency Services – Air Operations  
Director Aviation, District Officer and Station Officer respectively                                |
| **12 March**       | Owen Donovan                                                                | Department of Parks and Wildlife -- Air Attack Supervisor                                       |
| **12 March**       | Bob Hay                                                                      | Department of the Premier and Cabinet State Recovery Controller                                  |
| **14 March**       | Superintendent Craig Waters  
Superintendent Alan Riley         | Department of Fire and Emergency Services -- Regional Superintendents                            |
| **14 March**       | Superintendent Gary Baxter  
District Officer Mike Scott  
Station Officer Melissa Cooper  
Community Emergency Services Manager Damien Pumphrey | Department of Fire and Emergency Services – members of the Incident Management Team. Daniel Pumphrey is the City of Swan’s Community Emergency Services Manager |
<table>
<thead>
<tr>
<th>Date</th>
<th>Participants</th>
<th>Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 March</td>
<td>Mal Cronstedt AFSM</td>
<td>Office of Bush Fire Risk Management Director</td>
</tr>
<tr>
<td>17 March</td>
<td>Quinta La Rosa, Merveen Cross, Karl Gill</td>
<td>State Emergency Management Committee Secretariat -- Community Emergency Management Officers</td>
</tr>
<tr>
<td>17 March</td>
<td>Murray Carter</td>
<td>Department of Parks and Wildlife – Manager Fire Management Services</td>
</tr>
<tr>
<td>17 March</td>
<td>Kim Dean, Joanne Bennett, Ryan Hamblion, David Skipworth, Mara Basanovic</td>
<td>Department of Child Protection &amp; Family Services – Director Emergency Services, Senior District Emergency Services Officer, emergency Services Officer and Community Resilience Liaison Officer respectively. Mara Basanovic is CEO, Volunteering WA.</td>
</tr>
<tr>
<td>18 March</td>
<td>Adrian Dyson, Mark Casotti</td>
<td>Shire of Mundaring - Manager Health and Community Safety Services and Community Emergency Services Manager respectively</td>
</tr>
<tr>
<td>18 March</td>
<td>Michelle Neil, Lauren Gardiner</td>
<td>Department of Fire and Emergency Services – A/Director Media and Corporate Communications and A/Senior Media and Communications Officer respectively</td>
</tr>
<tr>
<td>18 March</td>
<td>Jennifer Pidgeon, Heather McNamara, Rachel Jones</td>
<td>Department of Fire and Emergency Services – A/Manager Community Engagement Community Engagement Coordinators respectively</td>
</tr>
<tr>
<td>18 March</td>
<td>Colin James</td>
<td>Resident and member of the Bushfire Ready Program</td>
</tr>
<tr>
<td>18 March</td>
<td>Multiple Volunteers, Mark Casotti</td>
<td>Shire of Mundaring Bushfire Brigades' Volunteers and Chief Bush Fire Control Officer</td>
</tr>
<tr>
<td>19 March</td>
<td>Karen Edmeades, Caroline Doherty</td>
<td>Red Cross Western Australian Branch</td>
</tr>
<tr>
<td>21 March</td>
<td>District Emergency Management Committee</td>
<td>Members from the relevant local government authorities (Mundaring, Swan, Bassendean and Kalamunda)</td>
</tr>
<tr>
<td>21 March</td>
<td>Paul O’Connor</td>
<td>Shire of Mundaring – Director Corporate Services</td>
</tr>
<tr>
<td>24 March</td>
<td>Bob Hay, Geoff Hay</td>
<td>Department of the Premier and Cabinet State Recovery Controller and Assistant Director General (Office of State Security and Emergency Coordination)</td>
</tr>
<tr>
<td>Date</td>
<td>Name(s)</td>
<td>Role/Position</td>
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</tr>
<tr>
<td>24 March</td>
<td>Lloyd Bailey</td>
<td>Department of Fire &amp; Emergency Services – Deputy Commissioner -- Operations</td>
</tr>
<tr>
<td>24 March</td>
<td>Suellen Flint</td>
<td>Department of Fire and Emergency Services – Director Community Engagement</td>
</tr>
<tr>
<td>25 March</td>
<td>A/Superintendent Wayne Hawes, Inspector Greg Knott, A/Inspector Peter Sawyer, Steven Byrne</td>
<td>WA Police – Officers involved in planning and undertaking duties during fire emergencies</td>
</tr>
<tr>
<td>25 March</td>
<td>Fire Danger Rating Liaison Group</td>
<td>Representatives of agencies involved in preparedness and post impact bushfire emergencies</td>
</tr>
<tr>
<td>26 March</td>
<td>Mundaring Community Members</td>
<td>At event hosted by the Shire of Mundaring</td>
</tr>
<tr>
<td>28 March</td>
<td>Frank Martinelli, Kevin Jolly, Lee Anderson</td>
<td>United Firefighters Union President, Secretary and Industrial Officer respectively</td>
</tr>
<tr>
<td>1 April</td>
<td>Merveen Cross, Quinta La Rosa</td>
<td>State Emergency Management Committee Secretariat -- Community Emergency Management Officers</td>
</tr>
<tr>
<td>2 April</td>
<td>Stephen MacCarthy, George Basanovic</td>
<td>Water Corporation – Security program Unit</td>
</tr>
<tr>
<td>2 April</td>
<td>Steve Pethick, Bobby Aitken</td>
<td>Western Power – Primary Response Coordinator and Senior Continuous Improvement Business Partner (Emergency Response)</td>
</tr>
<tr>
<td>2 April</td>
<td>Shane Kinnear</td>
<td>Telstra – Perth Enhanced Services Team Leader</td>
</tr>
<tr>
<td>6 April</td>
<td>Helen Dullard</td>
<td>President, Shire of Mundaring</td>
</tr>
<tr>
<td>7 April</td>
<td>Stephen Fox</td>
<td>Councillor, Shire of Mundaring (East Ward) Chair of the Local Emergency Management Committee</td>
</tr>
<tr>
<td>15 April</td>
<td>Bruce Telfer</td>
<td>Office of Bush Fire Risk Management – Manager Analysis and Reporting</td>
</tr>
<tr>
<td>16 April</td>
<td>Dave Gossage, Shire of Serpentine-Jarrahdale -- Manager Emergency Services &amp; Chief Fire Control Officer</td>
<td></td>
</tr>
<tr>
<td>1 May</td>
<td>Greg Jones, Kristi Turner</td>
<td>Stoneville-Parkerville progress Association Inc President and Secretary respectively</td>
</tr>
</tbody>
</table>
Appendix Four – The Keech-Byram Drought Index

The KBDI is a drought index developed to measure soil moisture content and is a good indicative tool to apply as it is utilised across Australia by most fire agencies and facilitates comparisons of bulk fuel dryness. A high KBDI influences fire intensity largely because fuels have lower moisture content.
The **McArthur Forest Fire Danger Index** (FFDI) measures the degree of danger of fire in Australian forests. The index combines a record of dryness, based on rainfall and evaporation, with meteorological variables for wind speed, temperature, and humidity. In the case of the Parkerville-Stoneville-Mt Helena fire, the FFDI presents a more accurate indicator of the fire danger rating.

The **Grassland Fire Danger Index** (GFDI) indicates the potential for grassland fires to demonstrate fire behaviour from low to extreme. The GFDI combines the fuel curing (dryness of fuel), temperature, relative humidity, and the average of the sustained wind and wind gust speed.
Appendix Six – Timeline of events leading up to and during the fire

7 January 2014

12:42   Deputy Commissioner Operations requests the Duty Assistant Commissioner to undertake a range of planning and preparations for severe fire weather forecasted later in the week.

9 January 2014

09:00   BoM Emergency service Weather briefing highlights dangerous fire weather forecasted for the 10, 11 and 12 January.

12:44   Bushfire in Catterick (Inc 261252) has 15 fire appliances and firefighters in attendance for in excess of 89 hours.

15:00   Operational Preparedness’ Briefing (teleconference) held with the Fire Danger Rating Liaison Group to establish a coordinated approach between Agencies for upcoming dangerous fire weather.

10 January 2014

08:00   Westplan Heatwave initiated and on standby by Health Department.

09:35   Media Release to media outlets advising of dangerous fire weather for the weekend across southern parts of the State.

09:54   Total Fire Bans (TFB) proactively identified for the 11.1.2014 (68 Local Governments) and 12.1.2014 (112 Local Governments).

11:24   Team leader from Emergency Information Line advises that additional caller takers have been placed on availability.

13:13   DFES Air Operations confirm the availability of air frames for the next period including the weekend.

14:05   BoM Emergency Service Weather briefing confirms previous advice on 9.1.2014 of dangerous fire weather for 11 and 12 January.

15:46   Bushfire in Middle Swan (Inc 261364) has firefighters in attendance for in excess of 14 hours.

16:00   Commissioners Briefing Note prepared (MBN) detailing the forecasted severe fire weather and the preparatory actions being put in place.
16:20 Total Fire Ban Media Release to media outlets advising locations of TFB on Saturday 11.1.2014. Mandurah, Perth hills and surrounding areas.

16:30 Media release to media outlets advising the community to act decisively for the weekends dangerous fire conditions.

16:40 Media release to media outlets advising of severe fire danger for Perth, Mandurah and Perth Hills and surrounding areas.

11 January 2014

08:00 Goldfields Midlands Regional Operations centre at Northam activated to Phase 2 pre-emptive.

11:53 Bushfire in Jolimont (Inc 261432) has 51 fire appliances and firefighters in attendance for in excess of 114 hours.

10:00 DFES State Operations and Metropolitan Centres activated to phase 2 pre-emptive.

13:00 Operational Preparedness’ Briefing (teleconference) with all DFES Regions, SOCMET and WA Police to confirm fire danger and for preparatory actions to be implemented.

14:47 Bushfire in Boddington (Inc 261464) has 51 fire appliances and firefighters in attendance for in excess of 111 hours.

15:20 BOM weather advice received (IDW 30200) and is to be Severe to Extreme over the lower south west including Perth and Perth Hills. Peak weather forecasted to be 0900 to 1100 hours.

15:37 Media release highlighting the dangers of disposing of a lit cigarette.

16:26 Bushfire in Whiteman (Inc 261480) has 34 fire appliances and firefighters in attendance for in excess of 13 hours.

17:20 Total Fire Ban Media Release to media outlets advising locations of TFB on Sunday 12.1.2014. Mandurah, Perth hills and surrounding areas.

17:35 Total Fire Ban Media Release to media outlets advising locations of TFB on Sunday 12.1.2014. Parts of Goldfields Midlands Region.

17:50 Media release advising of Extreme and Severe fire danger for Perth, Mandurah, Perth Hills and surrounding areas for Sunday the 12.1.2014
18:00  Media release reissued advising of Extreme and Severe fire danger for Perth, Mandurah, Perth Hills and surrounding areas for Sunday the 12.1.2014

21:00  DFES State Operations Centre reduces rostered staff at 1800 and reverts back to phase 1.

12 January 2014

02:19  Bushfire in Middle Swan (Inc 261550) has 24 fire appliances and firefighters in attendance for in excess of 27 hours.

08:00  ComCen place additional staff on duty for the day are a pre-emptive measure.

10:00  State Operations and Metropolitan Centres opens to a Phase 2 pre-emptive Activation.

10:16  Bushfire in Nowergup (Inc 261572) has 30 fire appliances and firefighters in attendance for in excess of 19 hours.

10:58  Incoming 000 call from Telstra, reference number 909846

10:59  DFES ComCen receives 000 Call from Telstra and takes incident information from initial caller. KE CECHNER of 119 Johnson Road Parkerville.

11:01  Bushfire in Parkerville (Inc 261576) is created by ComCen staff. Parkerville Level 2 bushfire has a total of 206 fire appliances and firefighters in attendance for in excess of 474 hours with last crews departing on the 1st of February 2014.

11:02  ComCen staff make initial comment on incident comments and initiate mobilising operational crews, managers and aircraft in line with DFES SOP 1 - Mobilising. This is by land line, direct line, mobile phone and pager. See FCAD Informees list

11:03  Initial incident information from 000 Caller for Parkerville bushfire reports tree and paddock fire, dry grass, 50 sqm involved at the moment, quite a big tree, 20 acre property. Fire is not quite 100m from the house.

11:03  First fire appliance from Kiara CFRS turns out to reported bushfire in Johnson and Granite Roads in Parkerville.

11:03  ComCen notifies DPaW Perth Hills Duty Officer of Parkerville bushfire as per DFES Mobilising SOP 1 for a Zone 2 response.
000 caller reporting the Parkerville bushfire advises Com Cen that she can hear fire sirens in close proximity.

Mundaring Chief Bushfire Control Officer M. Casotti requests for further Mundaring Appliances to be mobilised to the Parkerville bushfire.

Bureau of Meteorology notified of bushfire by ComCen via landline.

Western Power advised of bushfire by ComCen via direct line.

First of numerous Bushfire Brigades turn out to Parkerville bushfire.

Spot weather forecast requested from BOM for the Parkerville bushfire.

Shire of Mundaring Deputy Chief Bushfire Control Officer turns out to Parkerville bushfire.

Parkerville Bushfire Brigades arrive and advise DFES ComCen of a bushfire 60 x 30 metres spotting 60 metres in front of head fire. 11:11 State Air desk notifies ComCen that the rotary wing aircraft are mobile to incident (Helitacs 671 & 672)

Shire of Mundaring Chief Bushfire Control Officer turns out

Station Officer M Dilalio Kiara CFRS upgrades incident to 3rd Alarm indicating additional resources are required.

Fire Investigation Officer paged to attend a 3rd alarm Parkerville bushfire with possibility of a fallen power pole causing the fires ignition.

Glen Forrest BF Light Tanker 1 arrives at Parkerville bushfire.

Shire of Mundaring Deputy Chief Bushfire Control Officer 3 (DCBFCO) arrives

DO Hills paged to attend a 4th alarm bushfire in Parkerville.

Chidlow BFB paged to attend a 4th alarm bushfire in Parkerville.

DO South East turns out to Parkerville bushfire.

Shire of Mundaring Chief Bushfire Control Officer (CBFCO) arrives at Parkerville bushfire.

Shire of Mundaring Chief Bushfire Control Officer (CBFCO) requests emergency warning be released for Parkerville area.

DPaW Perth Hills Duty officer advise ComCen that 3 heavy duty fire appliance's and a front end loader are mobile to the Parkerville bushfire.
11:40 Grade 3 refreshments requested from IMT, Chaplain paged to support Parkerville Bushfire.

11:41 Shire of Mundaring Chief Bushfire Control Officer (CBFCO) requests spot weather forecast from BOM for Parkerville bushfire.

11:42 WA Police requested to close Riley Road between Kintore and Lacy Roads in Parkerville.

12:53 DO South East arrives at Parkerville bushfire.

11:42 WA Police advised of bushfire in Parkerville by ComCen via direct line.

12:00 Mundaring VFRS arrive at Parkerville bushfire.

12:30 Section 13 approved for DFES Incident Controller for Parkerville bushfire.

12:38 Bushfire in Baldivis (Inc 261588) has 33 fire appliances and firefighters in attendance for in excess of 89 hours.

12:53 DO Hills arrives at Parkerville Bushfire.

12:59 Ambulance advise that a person at the Parkerville bushfire has fallen through roof in Stoneville and is later pronounced deceased at hospital.

13:00 Operational Preparedness' Briefing (teleconference) with all DFES Regions, SOCMET and WA Police to confirm fire danger and for preparatory actions to be implemented.

13:04 Superintendent Metropolitan North Coastal arrives at Parkerville bushfire.

13:30 Section 13 approved for replacement DFES Incident Controller at Parkerville bushfire.

13:18 Advice of property loss on Stoneville Road passed on from IMT to MOC.

13:38 Advice of property loss on Riley Road passed on from IMT to MOC.

13:48 Water Corporation requested to attend to Parkerville bushfire.

14:50 Level 2 Incident Declaration for Parkerville bushfire from Incident Controller received at SOC

15:00 Fire Danger Rating Liaison Group - Operational Preparedness Briefing held.
15:04 Form 1 received from the Incident Management Team at the Parkerville bushfire.

15:38 Bushfire in Swan View (Inc 261620) has 29 fire appliances and firefighters in attendance for in excess of 86 hours.

15:48 Hazardous Situation in Canning Vale (Inc 261623) has 16 fire appliances and firefighters in attendance for in excess of 14 hours.

16:00 Operations Area Support Group (OASG) Meeting/Teleconference held for the Parkerville bushfire and is chaired by MROC Superintendent

17:00 Community Meeting convened at Mundaring Recreation Centre for Parkerville bushfire.

17:30 Community Meeting convened at Mundaring Recreation Centre for Parkerville bushfire.

19:00 Community Meeting convened at Brown Park Community Centre Swan View for Parkerville bushfire.

17:30 Situation Report to SOC from IMT identifies initial sweep by the Rapid Damage Assessment Team identifies 37 properties destroyed.

17:30 DFES Community Liaison Unit (CLU) assist with Community Meeting held at Brown Park Swan View for Parkerville bushfire.

18:13 USAR Rapid Assessment Team arrive at Parkerville bushfire

19:54 USAR Rapid Assessment Team initial damage report identifies the loss of numerous property losses.

20:00 Section 13 approved for incoming night shift DFES Incident Controller for Parkerville bushfire.

13 January 2014

08:00 Section 13 approved for returning day shift DFES Incident Controller for Parkerville bushfire.

08:00 Commissioners Briefing Note (MBN) prepared and forwarded to Commissioner for Parkerville bushfire.

09:30 State Emergency Coordination Group - Strategic Situation Report prepared by Duty Assistant Commissioner G Gifford.

10:00 State Emergency Coordination Group met at DFES Emergency Services Complex in Cockburn to cover the Parkerville bushfire.
10:00  Community Meeting convened at Brown Park Community Centre Swan View for Parkerville bushfire.

11:07  Bushfire in Gnangara (Inc 261576) has firefighters in attendance for in excess of 42 hours.

15:00  Fire Danger Rating Liaison Group - Operational Preparedness Briefing held to discuss the Parkerville bushfire and other incidents.

16:00  Community Meeting convened at Brown Park Community Centre Swan View.

20:00  Section 13 approved for returning night shift DFES Incident Controller for Parkerville bushfire.

14 January 2014

10:00  Community Meeting convened at Brown Park Community Centre Swan View for Parkerville bushfire.

16:00  Community Meeting convened at Brown Park Community Centre Swan View.

20:00  Section 13 approved for returning night shift DFES Incident Controller for Parkerville bushfire.

15 January 2014

08:00  Section 13 approved for new day shift DFES Incident Controller for Parkerville bushfire.

10:00  Community Meeting convened at Stoneville Hall in Stoneville for Parkerville bushfire.

11:00  Community Meeting convened at Brown Park Community Centre Swan View for Parkerville bushfire.

13:30  Community Meeting convened at Stoneville Hall in Stoneville.

18:36  Level 1 Declaration declared from Level 2 approved by current Incident Controller for Parkerville bushfire.

20:00  Section 13 approved for returning night shift DFES Incident Controller for Parkerville bushfire.
16 January 2014
10:00   Community Meeting convened at Brown Park Community Centre Swan View for Parkerville bushfire.
16:50   Section 13 approved for returning night shift DFES Incident Controller for Parkerville bushfire.

17 January 2014
09:00   Transition to Recovery paperwork for the Parkerville bushfire prepared and signed by the CEO Shire of Mundaring and DFES Superintendent South East.
10:00   Final Community Meeting for the Parkerville bushfire held at Brown Park Community Centre in Swan View

31 January 2014
11:05   Informative message given on the Parkerville bushfire which estimates the bushfire had burnt through 386 hectares with an estimated damage in excess of $13 million.

1 February 2014
08:24   Parkerville bushfire in blacked out and all crews have departed the fire ground for home stations.

12. Acronyms & Abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AIIMS</td>
<td>Australasian Inter-Service Incident Management System</td>
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<tr>
<td>AVL</td>
<td>Automatic Vehicle Location System</td>
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<tr>
<td>CBFCO</td>
<td>Chief Bushfire Control Officer</td>
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<tr>
<td>CEMO</td>
<td>Community Emergency Management Officer</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>CESM</td>
<td>Community Emergency Services Manager</td>
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<td>CFRS</td>
<td>Career Fire and Rescue Service</td>
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<tr>
<td>CLU</td>
<td>Client Liaison Unit (DFES)</td>
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<td>COMCEN</td>
<td>Communication Centre (DFES)</td>
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<tr>
<td>CPFS</td>
<td>Department for Child Protection and Family Services</td>
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<tr>
<td>DBFCO</td>
<td>Deputy Bushfire Control Officer</td>
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<td>DEMC</td>
<td>District Emergency Management Committee</td>
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<tr>
<td>DFES</td>
<td>Department of Fire and Emergency Services</td>
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<td>DPaW</td>
<td>Department of Parks and Wildlife</td>
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<tr>
<td>DPC</td>
<td>Department of the Premier and Cabinet</td>
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