



FIRE SERVICES
COMMISSIONER
VICTORIA

Operational Review

**Westmeadows Grassfire
24 January 2012**

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LEADERSHIP
INTEGRATION
ACCOUNTABILITY

WORKING IN CONJUNCTION WITH



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Introduction

The Fire Services Commissioner (FSC) requested the Emergency Services Commissioner to undertake an operational review of the Westmeadows grass fire that occurred on 24 January 2012. Due to pre-existing workloads within the Office of the Emergency Services Commissioner (OESC), including work to develop a sustainable and appropriate methodology for undertaking operational reviews in the future, the Emergency Services Commissioner was unable to undertake this operational review. To enable this operational review to be conducted, the Fire Services Commissioner sought the assistance of a suitably qualified and experienced officer from the Department of Sustainability and Environment (DSE) to conduct this review.

The purpose of this operational review was to:

- identify and evaluate compliance with relevant standards applicable to participating agencies in relation to the response and management of the incident.
- make observations and identify learning's or issues that Metropolitan Fire and Emergency Services Board (MFB) and support agencies may explore further for the purposes of continuous improvement.

The intent of review is to identify where improvements have been realised and/or to identify where improvements can be made. Stakeholders are encouraged to consider the observations detailed in this report in view of continuous improvement to aspects of emergency management activities relating to vegetative fires in urban environments; especially on or near MFB and Country Fire Authority (CFA) fire agency boundaries.

Terms of reference

1. Command and Control arrangements that were initiated to manage this event,
2. Warnings and Advice issues ensuring they were timely, tailored and relevant and in line with the Common Alerting Protocol to the community
3. Incident Strategy developed to manage the fire
4. Interoperability between MFB and CFA resources
5. Safety systems adopted to provide for fire-fighter safety and
6. Requests for support agency services e.g., aircraft

Review methodology

The review examined the response to the Westmeadows fire in accordance with the terms of reference. The observations and suggestions in this report are intended to reduce risk, enhance response arrangements and procedures and enhance the provision of information and warnings to the community.

The review was conducted with assistance from OESC and the FSC's office and with the cooperation of the MFB, CFA, Victoria Police (VicPol) and DSE. The methodology used for this review included:

- gathering of incident information and agency group interviews with those involved in the incident
- assessment of documents prepared and distributed during and after the incident including agency debrief reports

The control agency

MFB was the control agency for the Westmeadows fire which straddled the MFB and CFA boundary with approximately two thirds of the fire on the CFA side of the boundary which included the majority of the assets at risk. As the fire started on the MFB side of the boundary

Emergency Services Telecommunications Authority (ESTA) protocols determined MFB as the control agency.

Event Description

At approximately 5.00pm on 24 January 2012, a grassfire occurred on the west side of Broadmeadows Valley Park which is a reserve managed by Hume City Council. The fire burnt about 30ha, passed under power transmission lines and threatened homes that backed onto the western side of the reserve.

The fire started around Erinbank Crescent, Westmeadows, which is an area of frequent suspicious vegetative fires and stolen car fires. The initial call to ESTA at 5.04pm located the fire in the vicinity of Barry Rd and Malmsbury Dr which is on the east side of the reserve. While MFB appliances were near that address further calls located the fire correctly near Erinbank Crescent and the first MFB appliance was on scene at 5.11pm. CFA were also called out to an incorrect address for this fire and when nothing was found at that address they were returned to station. Initial MFB responders (Station Officers from Broadmeadows and Somerton) increased the response to Greater Alarm Response System (GARS) 2nd Alarm within 10 minutes of arriving. A MFB Commander was turned out at 5:21pm to be the first Incident Controller (IC). At 5.23pm, while en-route to the fire, the MFB IC requested ESTA to turn out CFA Greenvale. ESTA notified the CFA District 14 Rostered Duty Officer (RDO) of the fire at 5.28pm due to CFA Greenvale turnout on 2nd Alarm. ESTA are required to notify the CFA RDO if three or more CFA appliances are called out; also if 3rd Alarm has been declared on the CFA/MFB border area ESTA are required to notify the CFA RDO.

At approx 5.40pm the CFA RDO contacted the Operations Officer at CFA Greenvale fire station and requested him to respond to the fire to give the RDO an appreciation of events. At 5.51pm that CFA Operations Officer checked in on scene; Dorset Drive and Piccadilly Court area, with ESTA radio contact (VKN8). The ESTA operator provided him with information on the Incident Controller, radio communication channels and the location of the control point. As the CFA Operations Officer couldn't contact the MFB Incident Controller by radio he informed the CFA RDO who turned out a further CFA Operations Officer to attend the control point as the CFA Liaison Officer. The initial CFA Operations Officer directed two CFA tankers on scene to the head of the fire and then relocated himself to an observation vantage point in Lewiston Grove which is north of the final fire area. The second CFA Operations Officer arrived at the control point (Erinbank Control) at 6.19pm when the fire was close to being contained.

The 2nd and 3rd Alarm MFB Incident Controllers progressively updated the response to 5th Alarm which at that point included ten MFB units, a mobile Incident Control Unit (a large bus modified for IMT operation) and incident management staff. CFA responded three firefighting units, a 4x4 field command vehicle (Greenvale Brigade FCV), a fireground Operations Officer and a Liaison Officer. Two DSE (Parks Victoria) slip-on units also turned out from nearby Woodlands Park. A helitac (water bombing helicopter) was requested at 5.56pm but wasn't available as the helitac from Essendon airport had already been despatched to another fire. At about the same time a Police and Ambulance helicopter (AIR495) was overhead but couldn't provide information to the Incident Controller as they were unable to contact him by radio. The 5th Alarm IC initiated contact with AIR495 by mobile phone at 6.49pm in order to obtain a greater level of situational awareness assisting in determining that the fire had been contained.

Fire fighting crews reported a variety of fuel hazard levels in the reserve and consequently fire behaviour varied considerably in rate of spread and flame height which was 2-3m at times. The fire control strategy adopted by responding MFB and CFA appliances was a direct attack on the head and flanks of the fire; working from the black. At 3rd Alarm callout (5.29pm) the more senior Incident Controller (responded as per GARS), while en-route, telephoned the Fire Services Communications Controller (FSCC) at 5.51pm and asked that MFB Emergency Command Centre (ECC) be contacted and requested to put out an Emergency Alert.

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Emergency Alerts are sent to landline telephones (voice message) based on the location of the handset, and mobile phones (text message) based on the service address; the alert area is designated by the Incident Controller.. At 6.30pm MFB issued a warning through their web site which automatically forwards information via email to ABC radio, local radio and commercial radio stations and Sky News television station. A further Advice message was issued via the MFB web alert system at 7.50pm. There was also a media news release issued by MFB which formed the basis of print media reports.



Figure 1. Fire scar looking from north to south; point of origin at the top of the picture. Note: previous fire scar, near the point of origin, which partly contained the spread of the fire.

When the more senior MFB Incident Controller arrived at 6.00pm he upgraded the response to 4th Alarm at 6.01pm. At 6.07pm, the Incident Controller observed an increase in the smoke plume over the fire and, following discussions with police, requested them to evacuate residences in the vicinity of Dorset Drive, Piccadilly Court and Eden Place, Greenvale (see map of the fire – Appendix 2), as a precaution. These locations were based on firefighter feedback on where properties were currently most at threat. An evacuation point was established at a small reserve in nearby Normanby Drive, one street back from the houses being evacuated. Only 4-5 households decided to leave their properties; most relocated to the footpath on the opposite side of the road where they could observe their homes and suppression operations. The remaining householders decided to stay and defend their properties. Evacuated residents were able to return to their homes by 6.30pm.

The fire had been upgraded to 5th Alarm at 6.23pm and the resultant more senior MFB Incident Controller (DCFO) was on scene at 6.32pm. At 6.49pm he issued a situation report to ESTA (VKN8). At 6.58pm the Incident Controller conducted an Emergency Management Team (EMT) meeting involving the agencies present (MFB, CFA, VicPol, Ambulance, DSE and Hume City). A further and final EMT meeting was held at 7.35pm which was followed by a joint agency After Action Review (debrief).

The fire was contained at 6.45pm and had burnt approximately 1.5km in length so rate of spread averaged approximately 1km/hr. Melbourne Airport weather forecast for 24 Jan. was

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32°, 25%, S25-30kms and @ 80% grass curing the forward rate of spread is calculated at 0.94km/hr; this would give a flame height of 1.8m in natural pasture. Chilean Needle Grass, which is a noxious weed, added additional 'flashy' fuel which increased the flame height to approximately 3m at times. The combination of weather conditions and natural pasture fuel were within extended first attack suppression conditions (Overall fuel hazard assessment guide, July 2010 – Appendix 1).

There were no injuries reported but the fire damaged a shed and burnt five fences that backed onto the reserve from Dorset Drive, Piccadilly Court and Eden Place. Hume City Council had maintained a slashed 12-15m break between the reserve and houses that backed onto the reserve which reduced the fire behaviour in those areas and consequently reduced the damage to private property.



Figure 2. North end of the fire showing fence damage and reduced fire activity due to, in part, slashing works and less cured grass adjoining the back fences of these properties.



Figure 3. About the middle of the fire, showing the benefits of an internal track and slashing works between the track and boundary fences.

Findings

CFA/MFB MOU and accompanying JSOPs do not provide guidance for Agency Commanders in re-determining the control agency (similar to CFA/DSE JSOP 3.01 – Determining the Fire Agency). CFA/DSE JSOP 3.01 also outlines the considerations when making the decision on control agency plus a referral system for a decision if needed. Alternatively Pre-incident Response Plans (as identified in CFA/MFB JSOP 10.2.12) could provide the pre-determined control agency and a 'go to' response plan for a designated location or risk. Municipalities and DSE input and undertakings, especially in preparedness works, are essential in ensuring the completeness of these pre-response plans.

Although communities affected by this incident weren't interviewed, neighbours to this and other similar reserves, especially those with high incidents of human caused fires, need to be aware of the risk from bushfire to their properties and be encouraged to undertake protection works and have a fire plan in place.

Event Preparedness

As the fire danger index for 24 January 2012 at Melbourne Airport was Forest Fire Danger Index (FFDI) 22 (High) and Grass Fire Danger Index (GFDI) 7 (Low-Moderate) CFA and DSE were on normal preparedness level for the fire season which was consistent with SOP J2.03 – Incident Management Team – Readiness Arrangements. MFB increase their preparedness levels on Total Fire Ban (TFB), Extreme and Code Red days. Hume City Council slashing works between residential boundary fences and the reserve and track maintenance within the reserve had been maintained. There was however areas of weeds in the reserve that provided additional ‘flashy’ fuels that increased flame height and fire intensity.

Command, Control and Coordination

A range of policies and guidance notes provide the standards for the command, control and coordination arrangements for Victoria. These include (but not limited to) the Fire Services Commissioner’s arrangements and policies, the Australasian Inter-service Incident Management System (AIIMS) and the Emergency Management Manual Victoria (EMMV).

Incident management for the Westmeadows fire

MFB Broadmeadows and Somerton pumper tankers were the initial turnouts at 5:04pm to this fire; after initially responding to Malmsbury Dr and Barry Rd they arrived at Erinbank Cr, the eventual control point, at 5.11pm. Within 10 minutes of arriving and gaining access to the reserve the MFB Station Officers increased the callout to 2nd Alarm which activated an additional two appliances as well as a MFB Commander to take over the role of Incident Controller from the first on scene Station Officer. This Commander, from Thomastown fire station, established a control point (Erinbank Control) at 5.27pm. The CFA RDO turned out an Operations Officer from Greenvale who arrived on scene at 5.51pm; a further CFA Operations Officer was also turned out as a Liaison Officer and arrived at the control point at 6.15pm.

At 5.29pm the first MFB Commander was on scene and increased the alarm to 3rd Alarm. This increased resources by a further two fire fighting appliances, a MFB control unit (CU1 is a large large vehicle specifically designed for incident management team use) and two additional MFB officers; one of whom was a more senior officer and assumed control when he arrived at the fire at 6.00pm. On arrival he immediately upgraded the fire to 4th Alarm and then to 5th Alarm at 6.23pm which activated a Deputy Chief Fire Officer (DCFO) to attend and replace the 3rd Alarm Incident Controller.

The eventual Incident Management Team (IMT) was Incident Controller, Operations Officer, Planning Officer, Logistics Officer and Public Information Officer (see Figure 4). The IMT was supported by the MFB ECC which issued MFB web based warnings and advice and provided other support as was required. ESTA provided resource deployment and ‘step-up’ support for MFB fire stations that had turned out appliances to this fire.

Key impediments to the effective management of this fire were:

- lack of intelligence on fire spread and the assets at threat
- lack of sectorisation which contributed to radio communication congestion and span of control issues
- lack of clarity in a radio communications plan for the incident reduced the effectiveness of the resources present. The variations in use of the two allocated channels, #14 and #15, were 2 fireground channels, individual fireground channel for CFA and MFB and a control and fireground channel.
- lack of an agreed CFA/MFB Pre-incident Response Plan (SOP J10.2.12) that addresses ‘go to’ control strategies and tactics, including the most appropriate appliances for

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vegetative fires in CFA/MFB border areas. There is a Hume City Council (Northern and Western Metropolitan Region) Bushfire Response Plan 2011/2012 that is MFB and CFA badged but only signed by CFA. Also, considerable material in the plan involves CFA and DSE arrangements while DSE badge and sign-off are missing.

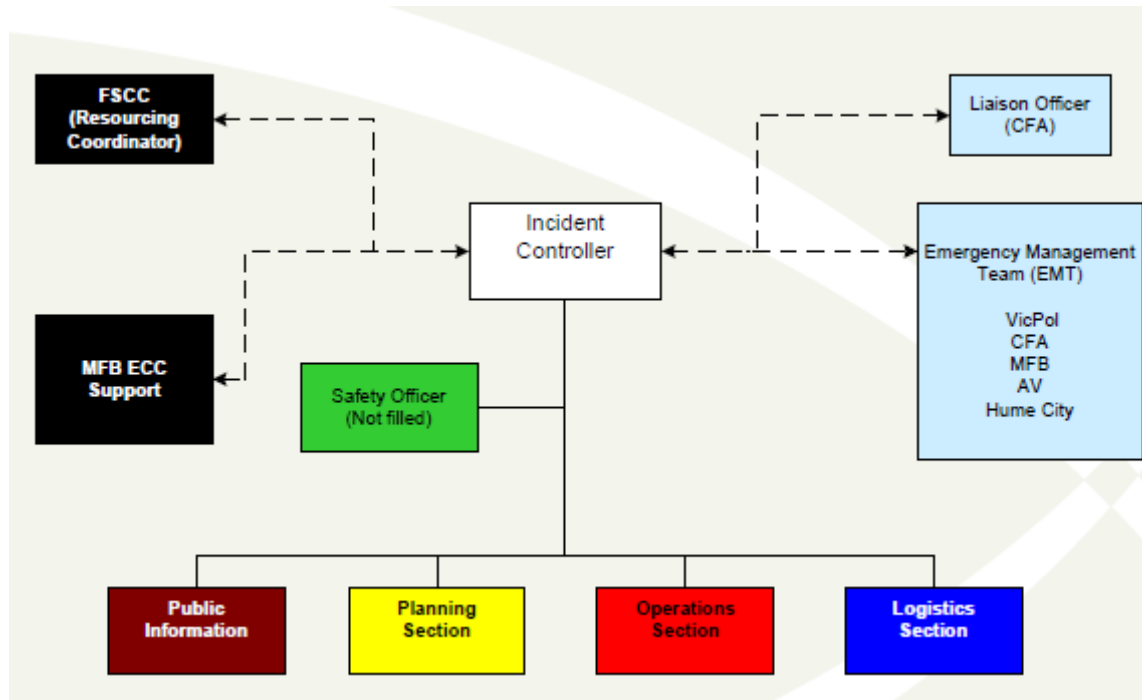


Figure 4. Incident Management Structure established for the Westmeadows Fire

The State Command and Control Arrangements for Bushfire in Victoria (8 August 2011) requires the MFB Chief Fire Officer (CFO) to notify the FSC of 5th Alarm fires. Upon notification the FSC decided normal agency (MFB) supervision, support and reporting arrangements were to be retained.

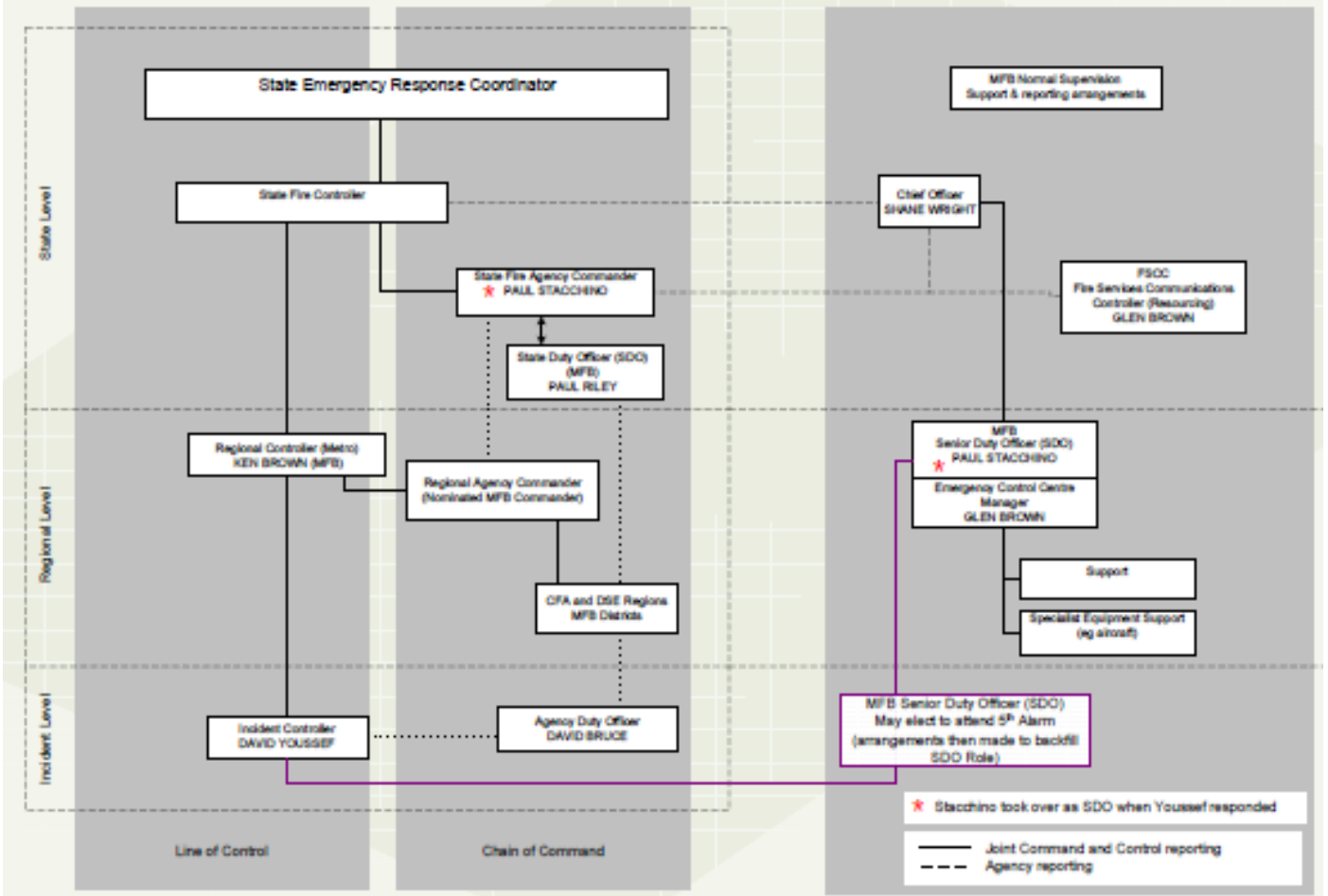
The FSC SOP 02/2011 – Reporting of Significant fires / emergencies to the Fire Services Commissioner (02/2011) requires the Agency Commander to notify the FSC of significant types of incidents. The definition of these notifiable incidents includes evacuation or relocation of individuals or communities.

Observations of MFB command and control structure (see Figure next page):

- The MFB Senior Duty Officer also fills the role of State Fire Agency Commander in the State Control Centre (SCC) reporting to both the FSC and the MFB CO. When an incident reaches 5th Alarm the MFB Senior Duty Officer may attend the incident as Incident Controller and a Duty Officer moves up into the vacant roles resulting in possible loss of continuity of incident intelligence in the replaced roles.
- The MFB ECC appears to be a duplication or replacement of the Regional Controller (RC) and the Regional Management Team (RMT) for MFB significant incidents. The roles and responsibilities of the Regional Controller and Regional Control Team were largely met by the MFB ECC for this incident.

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Command and Control Structure (MFB)
24th January 2012



Findings

CFA and MFB officers interviewed had limited knowledge of the CFA/MFB MOU and a lesser knowledge of the Joint Standard Operating Procedures attached to the MOU. Some of the systems in the MOU have been implemented but pre-incident planning for North West Metro Region provides minimal operational guidelines especially for this fire. To minimise the amount of separate fire agency agreements and procedures and to effectively manage future joint incident, consideration be given to withdrawing the CFA/MFB MOU, and the supporting Joint SOPs. In its place develop a CFA/MFB/DSE Local Mutual Aid Plan (LMAP) jointly signed by the three fire agencies.

A local arrangement such as providing a suitably qualified Deputy Incident Controller from the support agency, instead of a Liaison Officer, for 2nd Alarm vegetative fires is suggested. This position, especially if deployed early in a fire, could assist in re-determining the control agency, identify appropriate resources for the incident and assist with communications planning. Inclusion considerations into LMAPs are pre-incident plans including 'go to' Area of Operations arrangements where significant fires may occur near Victorian government boundaries. Additional benefits with current LMAPs are they are renewed each year and have governance arrangements in place to ensure a level of consistency between regional plans and sign-off agreement is obtained.

Suggestion that MFB consider providing office based support to responding Station Officers and Commanders similar to the CFA Rostered Duty Officer role, especially for the fire danger period. This backup would assist in early special resource deployment and support (eg Advice and Warnings) for significant incidents. It is appreciated however that MFB systems (eg GARS) need to operate 12 months of the year and that joint agency Bushfire Command and Control arrangements, which operate from 1st October to 31st May, don't align with MFB requirements. Additional joint agency systems and procedures, outside the scope of this review, are needed to address this issue.

Suggest that Hume City Council review their fire preparedness works for reserves, especially those with a high frequency of suspicious and deliberately lit fires. An additional fire break supporting perimeter fuel breaks and weed control of 'flashy' fuels are additional works to consider.

Multi-Agency & Organisational Arrangements

Emergency Management Team (EMT)

The Hume City Council manager of the Broadmeadows Valley Park provided ESTA with information on best access to the fire and was on scene prior to fire appliances arriving to open gates for access.

Police were quick to respond with sufficient resources for the incident; they were pro-active and consultative in the positioning of Traffic Management Points and in implementing evacuations. They doorknocked residents in the area being evacuated and provided incident information and advice in relation to the evacuation process. Police, including the Crime Unit from Broadmeadows who were investigating the cause of the fire, were a part of the EMT.

Incident EMT meetings were held at 6.58pm and 7.35pm involving MFB, CFA, Police, Hume City and Ambulance representatives. Prior to the EMT meetings there had been several discussions and decisions made between agencies at the control point. A key limiting factor in other agencies ability to efficiently carryout their functions was the lack of incident intelligence. Evidence of this was, without a map of the incident, considerable time was spent in the first EMT meeting establishing the extent of the fire and possible assets remaining at risk.

Cross agency support arrangements and interoperability

Neither CFA nor DSE first responding commanders integrated effectively with the MFB Incident Controller at the control point during the critical initial stages of this fire. During interviews reluctance was detected by less experienced firefighters from other agencies to fully engage with the more senior (higher ranked) MFB Officers at a control point. This is seen as a cultural issue between agencies as when a CFA Commander attended the Erinbank control point he found the MFB members were very open and willing to work closely with the CFA.



Figure 5. MFB crews battling the Westmeadows grass and scrub fire using high pressure hoses, working from the ground. Picture: David Caird. Source: Herald Sun

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Examples of opportunities missed due partly to lack of integration between agency commanders, particularly CFA and DSE commanders not attending the control point were:

- deployment of more appropriate appliances (CFA tankers) to suppress the fire.
- there was a CFA Greenvale Brigade 4x4 Forward Control Vehicle (FCV), with both MFB and CFA radios, parked at the incident which could have been used to gain incident information.
- DSE 4x4 slip-on units have CFA and DSE radios that could have also been deployed for incident information gathering.
- a light helicopter (Type 3), which are often used for aerial reconnaissance at similar fires, and a State Aircraft Unit (SAU) Air Observer were available at Essendon airport until 6.00pm.
- better management and use of the two assigned radio channels as more resources could have been at the control point to monitor and respond to radio and phone calls. Several radio calls to the control point were not answered. Additional radio channels would have further exasperated the communication demands on those at the control point.
- advice and warning messages going onto the CFA web site, especially for residents on the CFA side of the MFB/CFA border, and possible use of the State Control Centre (SCC) Information Unit to assist in more timely release of community messages.

Incident strategy developed to manage the fire

The Incident Management Team were not able to significantly influence control strategies being employed due primarily to the lack of available intelligence on the fire, and sometimes confusing feedback from the fireground. Also, due to a lack of adequate situational awareness, the Incident Controller had difficulty determining the required actions including the decisions as to when and where to evacuate residents adjoining the reserve.

The MFB system of changing the Incident Controller with a higher ranking officer as the Alarm level increases for a rapidly developing vegetative fire is likely to effect continuity of available intelligence.

Confusing incident information came from a CFA firefighter who reported that the head fire was contained at the creek but, due to a wind shift, was now working its way up to Barry Rd on the east side of the reserve. The fire didn't at any stage cross Yuroke Creek onto the east side of the reserve. This confusion resulted in some firefighting appliances being redirected to the east side of the reserve when there was a greater need for these resources to protect properties on the NW corner of the fire.

The first MFB appliances initially protected a new home, near Pipe Track, on the western edge of the fire and then responded to the head of the fire where they met up with the CFA tankers. These firefighters conducted an attack on the head of the fire with flame heights up to 3 metres at times while also protecting properties at threat on the western edge of the fire. This strategy was appropriate for the fire but more appropriate appliances and systems of operation (ie CFA tankers) would have been more efficient.

The MFB web based Incident Action Plan (eIAP) is good at capturing resources turned out to an incident but other information completed in the IAP for this fire didn't meet the requirements of SOP J3.03 – Incident Action Planning. The IAP produced didn't meet the minimum requirements as outlined in 4.1.2; that is lack of Incident Objective and strategies, communications plan and a map of the incident. The proposal to automatically download resource information from Computer Aided Dispatch (CAD) would provide additional time to complete other sections of the IAP.

Requests for support agency services (e.g. aircraft)

During interview with MFB it was made clear that MFB officers can request resources outside of GARS. The initial MFB Incident Controller made a specific request through VKN8 for CFA Greenvale tanker to be turned out and also requested a helitac through VKN8.

CFA/MFB SOP J11.1.4 – Request and use of State Fleet Aircraft by MFB (Procedure 1.3) states that an Authorised Officer or Incident Controller can request VKN8 to contact State Air Desk (SAD) with the aircraft request. It is suggested that Procedure 1.3 be reviewed as the VKN8 operator can't be expected to understand the operational requirements of the requested aircraft, the details of the aircraft support that needs to be in place, such as an Air Attack Supervisor (AAS), or the possibility of using an alternative aircraft that was available. MFB managers expressed caution in making any change to the current system of resource requests (all going through VKN8) as an alternative requesting system, especially for an infrequently used resource, would be difficult to implement effectively. A helitac with support AAS wasn't available from Essendon airport but the 3rd Alarm Incident Controller was able to gain some aerial information from Police and Ambulance helicopter (AIR495) via mobile phone.

It was questioned in the MFB executive officers' debrief why CFA had not responded additional appliances independent of the MFB response. Normal custom and practice often results in CFA responding additional resources (particularly where fires spread into the CFA area). This practice contravenes CFA/MFB SOP J10.2.5 – Initial Response and Escalation for Mutual Aid (Procedures 2.1 and 2.2). where the IC has not endorsed the other agency additional resourcing.

Fire investigation

Police from Broadmeadows Criminal Investigation Unit (CIU) attended the fire and were present at the EMT meeting at 6.58pm. Four youths were seen leaving the area of the fire shortly before the first calls to ESTA; the fire investigators have determined the fire as suspicious. The Broadmeadows Valley Park has several suspicious vegetative fires and deliberately lit stolen car fires in the reserve each year. The level of human caused fires (up to 200/year) in the NW Metro Region each year is beyond the capacity of police fire investigators and the MFB Fire Investigation Analysts (FIA) to investigate fully.



Figure 6. Westmeadows fire from near the point of origin with a previous fire scar in the middle of the burnt area.

Safety systems adopted to provide for fire-fighter safety

There was no Safety Officer appointed to the IMT but Brigade medical staff were called to the fire scene by FSCC which is consistent with ESTA tables for when an incident is escalated to Alarm Level 4 or Alarm Level 5. The Incident Controller performs the role of Safety Officer until it is devolved. A Safety Officer is generally filled at 2nd Alarm for structural fires but is not necessarily implemented for non-structure fires.

For a rapidly developing incident, especially where multiple access points are available, it was very difficult to provide the initial responding resources with an adequate briefing prior to them commencing their tasks on the fireground. All MFB and CFA extended attack resources were informed by VKN8 of the control point and later a staging point as the place to respond. All appliances were also informed by VKN8 of communication channels or channel to operate on but this later became confused due to different applications of the channels on the fireground. As previously mentioned congestion of radio fireground and VKN8 channels were a problem at this fire mainly due to not having a defined communications plan for the two channels assigned to the fire. Also there appeared to be insufficient resources to answer radio calls into the control point.

A fireground update/safety alert was broadcast by a MFB Commander assigned to coordinating fireground operations in relation to appliances keeping the recommended 20m away from the power transmission lines that run through the western side of the reserve.

MFB method of fighting grass and scrub fires from the ground would have been very physically taxing on firefighters due to them having to pull high pressure hoses over uneven ground while working in close proximity to considerable heat and smoke. Firefighter hydration/nutrition welfare was identified in the IAP as a risk. Control measures to address this risk were additional hydration (water and hydrolytes) provided at the staging area and firefighters were reminded to rehydrate.

Findings

Consider re-designing MFB eIAP to include CAD information automatically uploaded into the eIAP. This information could include resources deployed with turn-out time, the incident structure (including Sector Commanders) and communications plan where fireground channels are assigned to Sectors (suggest should not be assigned to fire agencies) and when requested a control channel. ESTA rules and tables may need to be reviewed to ensure clarity in the radio communication plan for an incident. It is suggested the required detail in the SMEACS pro-forma in the eIAP be reduced to key information that can reasonably be provided within the normal duration of a MFB significant incident. A simple mapping tool such as FireMap would also be an improvement, especially in providing information for IMT and EMT members to undertake their functions.

MFB appointment of a Safety Officer needs to align with Procedure 2, SOP J3.04 – Safety Officer to ensure consistency with the other fire agency requirements in joint operations.

Interoperability between the fire agencies was compromised by radio congestion on the fire ground channels and VKN8. Also not having a CFA or DSE Commander at the control point until the fire was almost contained was a factor in not realising the potential of resources that were available.

CFA tankers and firefighting systems; particularly firefighters working from the back of 4x4 drive appliances, are more appropriate for grass and scrub fires than MFB appliances and systems.

It is suggested CFA/MFB SOP J10.2.5 (Procedures 2.1, 2.2 and 2.3) be reviewed where consideration is given to deploying a Deputy Incident Controller (not Liaison Officer) from the supporting agency to attend the Control Point at 2nd Alarm for vegetative fires. Alternatively MFB become a joint signatory to a revised SOP J3.08 - Appointment of Incident Controller. It should be a practice to appoint a Deputy Incident Controller (DIC) for significant incidents given the expectations of EMT's, also warnings and advice and the possibility of evacuations. **The practice of agency independent resource response is not an efficient and effective use of resources; it also contravenes CFA/MFB SOP J10.2.5 (Procedure 2.1) and consequently needs to be prevented.** A DIC from the other agency, as practiced by DSE and CFA, assists in determining the most appropriate resources for joint incidents. Suggestion is also to review Fireline Pocketbooks (or similar) with prompts for first agency Commanders to discuss:

- most appropriate control agency
- Information gathering and development of incident intelligence (mapping / incident predictions / risk analysis)
- Resources required including appropriate aircraft appliances
- Communications plan and support at the control point to manage the incident
- Fireground safety issues (fireground updates and red flag warnings)
- Management structure including sectorisation
- Community warnings and advice
- Notifications and establishment of an EMT

The consequences of not achieving the control tactics with the available resources and their level of fatigue of could have been additional assets threatened; especially if the fire was able to cross onto the eastern side of the reserve. It is suggested MFB Commanders be given the opportunity to gain additional experience in adopting a variety of alternative control strategies and tactics in fighting vegetative fires.

SOP J11.1.4 – Request and use of State Fleet Aircraft by MFB (Procedure 1.3); suggest this be reviewed to ensure alignment with the expectations of VKN8 Operators.

Community Information and Warnings

The 3rd Alarm Incident Controller, while en-route to the fire, telephoned FSCC at 5.51pm and asked them to contact the MFB ECC to put out an Emergency Alert. This request was interpreted by MFB ECC to issue a warning using the MFB web warning system. The system involves an advice or warning being issued via the MFB web site which automatically sends the information to ABC radio, local radio, commercial radio and Sky News television. The first MFB web warning was issued at 6.30pm and a second message was issued at 7.50pm.

The first message was not given a warning type heading as outlined in SOP J4.01 (Procedure 2). The second message was labelled as Advice and although it was more consistent with an All Clear message it met the requirements of the SOP (see definition of an All Clear message in Definitions).

While travelling to the fire the first CFA Commander called his RDO and due to the amount of smoke he could see suggested the CFA RDO issue a CFA Advice message. The CFA RDO response was that the fire was being managed by MFB and as Incident Controller approval was required it was decided to leave the warnings and advice messaging to MFB.

In hindsight CFA District Operations Officer saw this as not a good decision as MFB web warnings are currently not linked to other fire agency web sites (ie via One Source One Message (OSOM)) so residents on the CFA side of the fire (the west side) would not have found warning or advice information on the CFA web site.

SOP J3.12 – Evacuation during Bushfires (Procedure 7.2) requires the Information Officer to 'issue the recommendation to evacuate using appropriate tools'. For the Westmeadows fire neither an Emergency Alert or SEWS were used. Instead direct contact was made with affected residents which is more consistent with the Advice and Watch and Act message guidelines in the MFB Warnings Protocol;. For the number of residents affected, and to obtain a quick appreciation of any vulnerable residents, it would appear the appropriate delivery tool was used for this fire.

Findings

For SOP J3.12 and MFB Warnings Protocol; where evacuations can be targeted to specific areas, consideration be given to using alternative tools to those currently recommended. This would however rely on smaller scale incidents with good intelligence of the fire's progress and assets threatened. There is a requirement for consistency in approach and alignment of message categories for evacuation approaches. The benefits of this approach would be a more controlled and manageable evacuation especially in areas of limited egress.

Note: MFB are intending to change their web warning system to OSOM for the 2012/2013 fire season which would avert the problem of MFB warnings not appearing on the other fire agency's web sites.

SOP J4.01 – Incident Warning and Advice; circumstances as outlined in Procedure 1.10 had not been met so the decision of CFA RDO, not to issue a CFA warning or advice, was consistent with SOP J4.01.

Definitions

Emergency Management Team (EMT)

An emergency management team is the team which assists a controller in formulating a response strategy and in its execution by all agencies, and which assists the Emergency Response Coordinator in determining resource acquisition needs and in ensuring a coordinated response to the emergency.

Fire Break

Any natural or constructed discontinuity in a fuel bed that may be used to segregate, stop and control the spread of a bushfire, or to provide a fire control line from which to suppress a fire.

Fuelbreak

A strip of land (not including areas subject to broad area fuel reduction burning) where vegetation has been removed or modified to reduce the risk of fires starting and/or to reduce the rate of spread and intensity of any fire that may occur in or enter the treated area.

Incident Controller

The Incident Controller is a member of the control agency whose role is to provide leadership and management to resolve the emergency at the incident site. This is the agency's forward controller and operates in close proximity to the incident.

Incident Management System (IMS)

A system used by agencies undertaking their management responsibilities in response to an emergency. An Incident Management System is not a fixed set of rules, but rather a flexible and dynamic methodology, which can cater for an escalation or change in the severity of any emergency. The system is established by a *response agency* and will involve use of personnel for the various functions, which may need to be individually managed. Incident management functions might include, but are not limited to: control, planning, operations, logistics, intelligence, information, investigation, finance or administration.

Incident Management Team (IMT)

An incident management team comprises the *incident controller* and the personnel responsible for the other functions (principally planning, operations and logistics) forming the *incident management system*.

One Source One Message (OSOM)

OSOM is the principle system used by fire services and VICSES in Victoria to issue information and warnings to the community and provides simultaneous warnings and information to the community via emergency broadcasters, the CFA, DSE and VCISES websites and other information mediums.

Warning Types

There are three distinct levels of alerts which are to be used for community warnings within Victoria. The decision-making process will identify which of the following levels of alert will need to be issued to the community.

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Advice – general information to keep you up-to-date with developments.

Watch and Act – it is likely that you may be impacted by the emergency. You may be in danger and should start taking action to protect your life and your family.

Emergency Warning – you will be impacted by the emergency. You are in danger and must take action immediately. This message may be preceded by the Standard Emergency Warning Signal.

All Clear – to be issued when fire activity in an area has subsided. An 'all clear' message should be issued as a follow up to each incident/potential incident where a warning or advice has been issued. Advice messages, used to update information may serve a similar purpose.

Appendix 1 - Compliance with Procedures and Guidelines

Document	Level of Compliance	Variation to Compliance/Comment
Emergency Management Manual Victoria (EMMV) – Evacuation Guideline Part 8 (Appendix 9)	Compliant	P3-34; issuing a warning or recommendation to evacuate (<i>guideline does not state how</i>)
Fire Services Commissioner Policy (FSCPOLICY 001/2011) Strategic Control Priorities – State Controller's Intent	Partially compliant	Incident Controller should ensure: <ul style="list-style-type: none"> ▪ continuous situation awareness ▪ incident intelligence (fire behaviour) ▪ incident prediction ▪ mapping ▪ incident management structure ▪ understanding community impacts and consequences ▪ communications
State Command and Control Arrangements for Bushfires in Victoria (8 August 2011)	Partially compliant	1.1 Purpose: <ul style="list-style-type: none"> ▪ Ensuring timely information flow to the community ▪ Provide an integrated and seamless approach to bushfire management
Fire Services Commissioner Guidance Note 01/2011 Incident management: Incident Controllers Guide	Partially compliant	Incident Strategy
Fire Services Commissioner SOP (FSC SOP02/2011) – Reporting of significant fires/emergencies to Fire Services Commissioner	Compliant	
CFA/MFB – Joint Operational Activities, Memorandum of Understanding (Dec 2010) Includes: <ul style="list-style-type: none"> ▪ JSOP 10.2.5 – Initial Response & Escalation for Mutual Aid ▪ JSOP 10.2.6 – Communications ▪ JSOP 10.2.7 – Command and Control ▪ JSOP 10.2.8 – Liaison Officers ▪ JSOP 11.1.4 – Request and Use of State Fleet Aircraft by MFB ▪ JSOP 10.2.12 - CFA/MFB Pre-incident Response Plans 	Partially compliant	<ul style="list-style-type: none"> ▪ compliant but suggest review of control agency determination ▪ 3. Fireground Operations – reporting to Control Point ▪ 1.4, 1.5 & 2.2 partially compliant ▪ 2.1 partially compliant ▪ compliant but suggest review of 1.3 ▪ pre-plan prepared but not signed by MFB and DSE
Fire Services Commissioner SOP J4.01 – Incident Warnings and Advice	Partially compliant	Type of advice/warning not clear Procedure 4.1 not actioned by CFA
Victorian Warning Protocol	Partially compliant	Type of advice/warning not clear

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MFB Warnings Protocol	Partially compliant	Type of advice/warning not clear. Procedure 2.1 mostly compliant
Fire Services Commissioner SOP J3.12 – Evacuations during bushfires	Compliant	Procedures 7.3 & 7.4 Compliance Not Required
Fire Services Commissioner SOP J3.06 – Briefings	Partially compliant	Procedure 5. - CFA and DSE resources not reporting to the Control Point
Fire Services Commissioner SOP J11.01 – Bushfire Investigation	Compliant	
Fire Services Commissioner SOP J3.03 – Incident Action Planning	Partially compliant	Procedure 4.1.2 – incident strategy, communications plan and fireground structure (Sectors)

Compliant - complies with the intent of the procedure or guideline

Partially compliant - complies with some but not all content of the procedure or guideline

Not compliant - does not comply with the intent of the procedure or guideline

Appendix 2 - Interviews

Personnel Interviewed
MFB State Duty Officer
MFB Regional Controller (NW Metro) MFB ECC Manager
MFB State Agency Commander
MFB Incident Controllers x 3
MFB Station Officers x 2
MFB Fire Investigation Analyst
CFA Commanders x 2
State Aircraft Unit – Aviation Services Manager
Victoria Police Commander

