

Response to Coroner Olle's inquest into the deaths of Katie Peters and Steven Kadar

March 2016

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References and abbreviations:

- **AFAC:** Australasian Fire and Emergency Service Authorities Council
- **CFA:** Country Fire Authority
- **Chief Fire Officer** means the Chief Fire Officer, Department of Environment, Land, Water and Planning
- **Department** means Department of Environment, Land, Water and Planning (DELWP)
- **EMV:** Emergency Management Victoria
- **FBAN:** Fire Behaviour Analyst
- **FOPS:** Falling Object Protection System
- **IMT:** Incident Management Team
- **JSOP:** Joint Standard Operating Procedure
- **LACES:** Lookouts, Awareness, Communication, Escape Routes and Safety Zones
- **MFB:** Metropolitan Fire Brigade
- **PV:** Parks Victoria
- **Secretary** means the Secretary, Department of Environment, Land, Water and Planning
- **SES:** State Emergency Services
- **SMEACS:** Situation, Mission, Execution, Administration, Command and Communications, Safety

Overview

The Department of Environment, Land, Water and Planning welcomes the recommendations and suggestions from Coroner Olle's inquest into the tragic deaths of Katie Peters and Steven Kadar in February 2013. Katie and Steven were well respected and hardworking firefighters who made a valuable contribution to the important work of the Department. Their loss was felt, and continues to be felt, by the organisation and our emergency management sector partners. Their deaths were a stark reminder of the challenges and risks of firefighting.

The Department has commenced implementing or will implement all recommendations and suggestions handed down by His Honour. The Department considers that safety is the paramount consideration for everything that we do. We are committed to creating as safe a workplace as possible for our staff.

Coroner Olle's recommendations and suggestions details specific actions to improve the safety of personnel on the fire ground when fire fighting in hazardous tree environments. These actions will be considered as part of the broader work focused on staff safety and wellbeing, underpinned by principles of continual learning and improvement.

The Department continues to operate under the auspices of the State Strategic Control Priorities, established by Victoria's Emergency Management Commissioner, which provide clear direction on the priorities that are required to be actioned during the response to any emergency. The first of these priorities is that the protection and preservation of life is paramount. Delivering the State Strategic Control Priorities requires the full participation and collaboration of all agencies in Victoria's emergency management sector including Emergency Management Victoria (EMV), the Victorian State Emergency Service (SES), Country Fire Authority (CFA), Metropolitan Fire Brigade (MFB) and partner agencies Parks Victoria (PV), Melbourne Water and VicForests. The Department will work closely with all agencies in the implementation of the Coroner's recommendations and suggestions.

Wellbeing and safety are part of the Department's four core values. The Department delivers on this through a range of health and wellbeing, injury management systems, safety and medical standards, programs and initiatives. These include the Department's Employee Assistance Program, health monitoring, audits and inspections, job safety planning, Safety Committee and governance program, peer support, the staff medical assessment program, and critical incident planning and targeted training for example first aid, psychological, and job safety planning.

The Department's response to Coroner Olle's inquest includes projects underway to mitigate the risk to operational personnel posed by tree hazard risks, including new tree hazard map layers, revised and new standards and procedures, awareness raising through briefings, and improved and safer vehicles.

Following the events of 13 February 2013, there was a major review and revitalisation of the materials used to convey tree hazard risks and new products were developed as part of an awareness campaign prior to the 2013-14 fire season. The Department will continue to communicate and consult with staff and raise awareness of tree hazard risks through state-wide work centre briefings, lessons-learned documentation, awareness posters and videos, pre-season updates, revisions to the state-wide *Victorian Bushfire Handbook*, safety advisory updates and illustration through practical case studies. The Department is also implementing a fire-damaged tree removal program, through the treatment of priority roads and public places.

These projects are reflective of the complexity of the risk and the range of activities that the Department undertakes in forested environments. The Department recognises that a suite of measures are required to reduce the risk across the breadth of our work. Communications and awareness, policies and procedures, and staff capability, are all required as no single measure alone will fully mitigate the risk to staff safety. The Department is also actively working on creating a safety culture across the workforce that embeds a sense of collective responsibility with everyone being encouraged to be aware of safety risks and speaking up about possible safety compromises.

The Department recognises the critical need to build-in a continual learning approach to improving safety. This will involve working with the community to improve their understanding of safety risks posed by hazardous trees and how this may influence the Departmental strategy in responding to fires.

The Department reiterates it is committed to the safety of its personnel and the community we serve and protect. Implementing Coroner Olle's recommendations and suggestions will assist in the Department's continual improvement in the safety of staff working in high-risk environments.

Response

In his inquest, Coroner Olle made 10 recommendations and four suggestions. **The Department accepts all recommendations and suggestions.** A detailed response to each recommendation and suggestion is provided below.

Recommendation 1: DELWP highlight the necessity for two-way situation and weather reporting between the IMT and those on the fire ground in its training and preseason briefings.

The Department will implement this recommendation.

The Department already has a comprehensive suite of policies, procedures and work instructions that supports its response to bushfires, consistent with the broader standards and procedures in place across the emergency management sector.

The Department, in consultation with the emergency management sector, will, however, review current training and pre-season material to ensure the importance of two-way situation and weather reporting between the IMT and the fire ground is highlighted. This action will be completed by **September 2016**.

The Department will review *Work Instruction: Fire ground Information and Red Flag Warnings* (WI 5.5.4.3) to ensure effective two-way situation reporting. This action will be completed by **August 2016**. The Work Instruction and *Joint Standard Operating Procedure: Red Flag Warnings* (JSOP 3.11) will be promoted at pre-season briefings and reflected in relevant training. This will be completed by **November 2016**.

The Department will consult with its partner agencies in the emergency management sector to ensure that any changes are reflected in existing, or new Joint Standard Operating Procedures (JSOPs) and in the *Victorian Bushfire Handbook* (which is reviewed and re-issued each year).

In addition, the Department will investigate options for enhanced fire ground intelligence systems using new tools and technologies, such as a smart phone application (App), to supplement existing weather products and support timely briefings. This investigation will consider the current reliability of communication networks and will be completed by **March 2017**. Consideration of communication systems innovation will remain ongoing.

Recommendation 2: DELWP require, where possible, more information be provided at both morning and evening briefings on the strategy of fighting the fire at particular locations.

The Department will implement this recommendation.

Morning and evening briefings are conducted using the SMEACS (Situation, Mission, Execution, Administration, Command and Communications, Safety) approach. The Department, in consultation with the emergency management sector, will review existing SMEACS guidelines and templates to ensure timely and relevant information on the strategy of fighting the fire at particular locations is provided at morning and evening briefings. This review will be completed by **September 2016**.

In addition, the Department will investigate the development of enhanced fire ground intelligence systems using new tools and technologies, such as a smart phone App, to support timely briefing on the strategy of fighting the fire. This will be completed by **March 2017**.

Recommendation 3: DELWP include information on the salmon card reporting process and how the information in a salmon card is used in its preseason briefings as well as providing specific feedback to each person who makes or is affected by a salmon card report.

The Department is implementing this recommendation.

Information on the salmon card reporting process and how the information in a salmon card is used will continue to be incorporated into pre-season briefing materials. In addition, incident reporting and incident trend information will be incorporated by the Department into pre-season briefing materials. This action will be completed by **September 2016**.

Individual feedback to each person submitting salmon cards is required to be provided by their manager or fire supervisor. This requirement, as outlined in the Department's *Incident Reporting Guideline*, will be reinforced during pre-season briefings and highlighted in the Department's incident reporting processes and associated documentation. Provision of feedback and close-out of incidents in the Department's incident reporting system ("POSSUM") is monitored by the Department's Safety and Wellbeing team.

The Department is currently developing a salmon card App to be used on smart phones and other portable devices. The App will enable more timely notification of incidents and the capture of more information on the incident. This action will facilitate more timely safety messaging and identification of corrective actions. The App will be developed by **November 2016**. This App will not replace manual reporting processes in areas where mobile coverage is limited or unavailable.

Recommendation 4: DELWP (together with any other relevant agencies) utilise an Options Analysis template that specifically nominates and identifies safety to firefighters and human life as the number one priority.

The Department will implement this recommendation.

The Department will initiate a review of existing Options Analysis processes and documentation in consultation with its emergency management sector partners to ensure the template specifically nominates and identifies safety to firefighters and the community as the number-one priority. This action will be finalised by **October 2016** for implementation in the 2016-17 fire season.

Recommendation 5: DELWP participate in a national review of falling tree fatality, injury and near-miss incidents involving trees during fire response operations, and a literature review on the subject to bring in some international context as articulated in exhibit 52 (Australasian Fire Authorities Council (AFAC) report) at page 8.

The Department will implement this recommendation.

The Department will initiate both a literature review on hazardous tree management and a hazardous trees safety incident review via the AFAC Rural and Land Management Group (RLMG). These reviews will consider the international context, in particular, the British Columbia Wildfire Service, who are currently undertaking a review of end-to-end processes for hazardous tree management.

The Department raised this review at the February meeting of the RLMG and will initiate the project by **May 2016**. Timeframes for completion of the reviews will be determined by agreement with the AFAC RLMG.

Recommendation 6: DELWP continue to implement its program of designing fire vehicles to withstand greater tree impacts.

The Department is implementing this recommendation through three major projects:

1. The Department is upgrading the entire 312 Toyota “slip-on” vehicle fleet to ultralight tankers. A key feature of the new vehicles is a Falling Object Protection System (FOPS) to reduce the impact of falling trees and limbs and offering firefighters a greater level of protection. The FOPS is compliant with international standards (ISO:3449:2008 Level 2). The changeover of fleet commenced in 2015 and is expected to be completed by **2020**.

A training manual and safe operating instruction for operation of the new ultralight tankers has been developed and training and assessment of operational staff to appropriate national standards commenced in **September 2015**. Training will be progressively delivered as the vehicles are rolled-out and form part of the Department’s standard training package.

2. The Department is currently testing new heavy tankers with increased passenger safety requirements to replace the existing heavy tanker fleet. The prototypes will be tested and evaluated by the Department to ensure compliance with international standards (ISO:3449:2008 Level 2). The new heavy tankers are expected to be rolled-out on a staged basis with 20 fire tankers in 2016-17 and 20-30 tankers per year until replacement of the existing 80-vehicle fleet is complete.

A training manual and safe operating instruction for operation of the heavy tankers will be developed and training of operational staff will commence in **August 2016**. Training and assessment will be progressively delivered as the vehicles are rolled-out and form part of the Department’s standard training package.

3. The Department is currently developing a rappel crew/operational vehicle to safely transport rappel and/or operational crews around the fire ground. The prototype crew vehicle will be compliant with internal standards (ISO 3449:2008 Level 2). The Department intends to supply each Rappel team with two vehicles (eight vehicles in total). This action is expected to be complete by **February 2018**.

A safe operating instruction will be developed for the rappel crew/operational vehicle and induction of operational staff will commence in **March 2016**. Induction will be progressively delivered as the vehicles are rolled-out.

Recommendation 7: DELWP re-emphasise the purpose of red flag warnings in its training and preseason briefings.

The Department will implement this recommendation.

The Department, in consultation with the emergency management sector, will re-emphasise the purpose of “Red Flag Warnings” in preseason briefing material. This action will be completed by **September 2016**.

A review of training materials will be undertaken to ensure that the Red Flag Warnings are properly and consistently understood. This action will be completed by **September 2016**.

Recommendation 8: DELWP liaise with any other relevant agency, to develop a training package designed for Operations Managers and Incident Controllers together with their support staff, which facilitates liaison with FBANS, interpreting the data accessed by FBANS and in establishing protocols for the dissemination of weather forecasts relevant to fire fighter safety to strike force leaders and sector commanders or via the open channel to all personnel.

The Department is implementing this recommendation.

The Department will review and update relevant multi-agency training courses (e.g. Operations Officer Level 2 and Incident Controller Level 2), in consultation with the emergency management sector, to include curriculum on liaison with FBANs and interpreting the products developed by FBANs. This action will be completed by **November 2016** and the Department will consider requirements associated with implementation of **recommendation 1**. Pre-season updates will also be used to advise the operational workforce as required.

The existing systems and processes involving daily briefings, Incident Action Plans, Fireground Information Updates and Red Flag Warnings are accepted protocols to disseminate weather forecasts or imminent events relevant to fire fighter safety, such as thunderstorm activity. The Department will work with agencies in the emergency management sector to reinforce application of these processes through pre-season and daily briefings and will ensure reference to these accepted protocols is included in relevant training materials. This action is ongoing.

Recommendation 9: DELWP liaise with any other relevant agency to ensure that the Options Analysis specifically addresses the terrain, topography, type of trees and their individual dangers in the context of the work proposed, and further should incorporate reference to the mapped areas of fire burnt alpine ash.

The Department will implement this recommendation.

The Department will initiate a review of existing Options Analysis processes and documentation in consultation with its emergency management sector partners. This review will look beyond Victoria and the fire-response context to examine practices of other emergency management agencies in both Australia and North America to identify leading practice. The review will ensure the revised Options Analysis processes and documentation specifically address the terrain, topography, type of trees, their individual dangers and refer to the current mapped areas of fire-affected alpine ash changes. This review will also consider the changes required to implement **recommendation 4**. This action will be finalised by **October 2016** for implementation in the 2016-17 fire season.

The review of the existing Options Analysis process and documentation will consider the new Departmental *Work Instruction: Initial Response in Very High Tree Hazard*, issued in January 2016, which addresses options and decision-making for response in fire killed ash (very high tree hazard) areas.

The Department has mapped tree hazard areas across the State, including fire affected alpine ash. This information is available in the eMap system and was first issued in Spring 2015. Use of the tree hazard maps was included as part of the pre-season briefings in October-November 2015. The Department will initiate a project to develop a second phase of tree hazard mapping to improve the accuracy of the data, coverage of vegetation types and to take into account recent fire activity. This action will be finalised by **November 2016**.

In reviewing the Options Analysis processes and documentation the Department will ensure that the revised processes and documentation refers to the mapped areas of fire affected alpine ash. This will be finalised by **October 2016** for implementation in the 2016-17 fire season.

Recommendation 10: DELWP liaise with any other relevant agency to develop a protocol which best ensures that fire crews are not exposed to fire-affected alpine ash forests unless absolutely necessary and only if all safety precautions, in particular removal of hazardous trees and regular monitoring of weather conditions are undertaken.

The Department will implement this recommendation.

A Joint Standard Operating Procedure (JSOP) 8.03 – Tree Hazard – Bushfire has been developed and agreed to by Victoria’s emergency management sector. The first version was issued in December 2014 and version 2 was issued in August 2015. The purpose of JSOP 8.03 is to mitigate the risk to emergency service personnel of injury or death from falling trees and branches during bushfire response.

The Department has also developed its own *Work Instruction: Initial Response in very high tree hazard* and issued it in January 2016. This Work Instruction addresses options and decision-making for fire response in very high tree hazard areas. The application of this Work Instruction during a multiple fire response situation near Marysville during the 2015-16 bushfire season is being documented as a case study to support its implementation.

The Department, in consultation with the emergency management sector, will explore extending the Work Instruction across the emergency management sector to ensure that fire crews are not exposed to fire-affected alpine ash forests unless absolutely necessary and only if all safety precautions, in particular removal of hazardous trees and regular monitoring of weather conditions is undertaken. This action will be finalised by **November 2016**.

Suggestions in Coroner’s Findings

In addition to the recommendations the Department has considered Coroner Olle's suggestions and made a decision to implement these suggestions as though they were recommendations.

Suggestion 1: DELWP access Mr Waddell’s¹ knowledge and impart his teaching on hazardous trees and safety strategies to all fire fighters who may be called to fight fires in alpine regions (p.12 – 13)

The Department has been and will continue to implement this suggestion.

The training referred to in the Coroner’s report (pgs. 12-13) was delivered by Mr Rob Caddell (a previous employee of the Department). This training was delivered under the auspices of a stand-alone course “Working in the Vicinity of Hazardous Trees” that was designed 2009 and first delivered during 2009 - 2010. This training was updated in 2010 and delivered as part of pre-season briefings.

The content has subsequently been incorporated into relevant courses in the Statewide fire role training program such as General Fire Fighter training. The course content is periodically updated to reflect changes in process. The most recent change occurred in late 2015 in response to *JSOP 8.03– Tree Hazard – Bushfire*.

The Department is committed to reviewing the statewide fire role training programs and has commenced initial planning for new training products that will supplement the existing course content. The intention is that these courses will support hazardous tree awareness and provide specific accreditation in hazardous tree assessment to authorise staff to assess and mark hazardous trees. This training will be rolled out systematically across the state.

This program will take approximately 18 months to design and deliver to key operational staff. It is anticipated to be completed by **September 2017**.

The Department will continue to work with the emergency management sector to improve awareness of the risks associated with hazardous trees and the development of skills and appropriate management strategies.

¹ The training referred to was delivered by Mr Rob Caddell (a previous employee of the Department), not ‘Mr Waddell’.

Suggestion 2: DELWP consider how they may promote the healing process and rebuilding of relationships going forward (p.24)

The Department is implementing this suggestion.

The Department supports the Coroner's statements recognising the dedication and bravery of firefighters, and acknowledging the inherently dangerous nature of their work.

The healing process involves both staff and the community. The Department has undertaken a range of activities to help facilitate this process. This has included:

- Facilitated briefings with staff and affected individuals following the fire.
- Commemorative activities to recognise Katie and Steven's contributions to the Department and their local communities, including the creation of the Katie Peters Reserve on the Mitta Mitta River and a memorial plaque for Steven Kadar established at the Corryong Office and Depot. Opening ceremonies for both were attended by families, friends and staff.
- Establishing a strong collaborative relationship with the Harrietville Community Forum, which was jointly convened by the community and DELWP/Parks Victoria following the Harrietville fire.
- Involvement in the development of the Harrietville Community Emergency Management Plan.

The Department will continue to work closely with Harrietville Community Forum and the local CFA brigade through the implementation of the emergency management plan.

The Department will also work closely with our staff to obtain feedback on safety improvements and to help achieve continual improvements in this area.

The Department is also developing a community service charter (our promise to the Victorian Community) that will describe how the Department will partner with and involve local communities in decision-making about public land and bushfire management – drawing on the community's knowledge and experience all year round.

This work is ongoing.

Suggestion 3: DELWP canvass the suggestions made by Ms Gibos with other agencies, in consideration of their implementation (p.24).

Ms Gibos suggestions:

Consider the benefit of having a look-out permanently placed on the fire ground, in particular when potential changes are forecast.

The Department will implement this suggestion.

Lookouts, Awareness, Communication, Escape Routes and Safety Zones (LACES) is already a well-established guide to help mitigate the risks that firefighters face, including burn over and entrapment during bushfire and planned burning operations. This is documented in the *Victorian Bushfire Handbook* (latest edition No. 5- September 2015). Lookout in this context refers to expected behaviour of all crew members and is not a designated function assigned the role of lookout.

The Department's *Response Manual* (Work Instruction, LACES Safety System, 5.5.3.3, December 2014) further extends the principle of lookout to require 'Where a burn-over or entrapment risk is identified a fixed, aerial or mobile

Lookout is to be deployed. Lookouts will ensure that they maintain a clear appreciation of current fire behaviour and location and size of the bushfire or burn in relationship to the on ground firefighter location’.

The Department will review the Work Instruction to consider its broader application to high-risk scenarios, including forecasting adverse weather. The Department will promote awareness and understanding of this Work Instruction to staff via pre-season briefings. In addition, the Department will consult with its emergency management sector partners to consider any changes required in the next edition of the *Victorian Bushfire Handbook*. These actions will be completed by **September 2016**.

That any information emanating from the FBANs be communicated along the entire chain of command.

The Department will be implementing this suggestion through implementation of **recommendations 1 and 8**.

Suggestion 4: DELWP in liaison with other agencies ensure that appropriate support staff is provided to decision makers, in particular Divisional, Operations and Ground Commanders (p.24).

The Department is implementing this suggestion.

The Department will continue to provide support to senior fire ground roles with support staff (e.g. note takers, FBANs).

This action is ongoing.

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