



SUBMISSION

Public Inquiry into the January 2016 Waroona Bushfire

Submission prepared by:
Community and Public Sector Union/Civil Service Association of WA
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Condolences

We would like to take the opportunity, on behalf of both the Union and our members, to offer our sincere condolences to the friends and families of Mr Malcolm Taylor and Mr Les Taylor, and to express our heartfelt support for all the families and communities affected by the fires, particularly the residents of Yarloop.

Forward

The Community and Public Sector Union/Civil Service Association (CPSU/CSA) is a West Australian (WA) union that represents 630 occupations in over 130 public sector agencies. We make work life better for over 40,000 people.

We represent our members in the Departments of Fire and Emergency Services (DFES) and Parks and Wildlife (DPaW), as well as other agencies involved in different aspects of bushfire prevention, preparedness, response and recovery including for example the Departments of Child Protection and Family Support, Agriculture and Food, Water and Planning.

The issues raised by the Inquiry relate directly to our members in these agencies. In developing this submission, the CPSU/CSA has been guided by the depth and breadth of members' experience. We have also talked with or met representatives of the Association of Volunteer Bushfire Brigades, the WA Volunteer Fire & rescue Services Association, the Emergency Services Volunteers Association. In all cases, the areas of common ground and concerns greatly outweighed the differences.

Bushfires in Western Australia (WA) are now more damaging with many fires occurring each summer with a significant number of houses being damaged or destroyed, and tragically people are being killed. The subsequent changes to bushfire management and prescribed burning post the early 1960s Royal Commission (Report of the Royal Commission Appointed to Enquire into and Report upon Bush Fires of December 1960, and January, February and March 1961 in Western Australia by G.J Rodger) achieved significant protection to the WA community. Bushfires have been identified as the most frequent and potentially damaging of all the natural hazards in this State. The potential ignition of bushfires occurs naturally, with lightning, and human caused whether deliberate, negligence or accident.

These catastrophic bushfires are occurring during a period when the WA Government Departments of Fire & Emergency Services (DFES) and Department of Parks and Wildlife (DPaW) have been restructured and faced funding cuts, the Emergency Services Levy (ESL) has increased at a greater rate than the consumer price index (CPI), prescribed burning has been reduced particularly in the landscape, and there has been a significant increase in aerial suppression capacity and costs.

Obviously these restructures and current modus operandi have not achieved a suitable nor acceptable level of bushfire protection to the WA community. The anecdotal evidence suggests that the restructuring, even with some increased expenditure and staffing, has not been successful in protecting the WA community. It is also very disturbing to see that DPaW now need Royalty for Regions finance to achieve its prescribed burning program, rather than its recurrent budget.

This restructuring of Government Departments has traditionally occurred over a number of years, but the most recent restructuring has occurred following the Keelty Inquiries and its recommendations. In addition to the WA Government Departments restructure, the volunteer bushfire brigades have been restructured with those in the Kimberley being managed by DFES and virtually all other bushfire brigades managed by the local government. There are now volunteer fire and rescue brigades managed through DFES, combined bushfire and SES brigades (emergency service brigades established under the *FES Act*) managed by DFES.

A further significant issue is where the restructuring of WA Government Departments has resulted in what appears to be a reduction in appropriately trained and competent bushfire management staff, resources and systems. There is a reduction in senior staff who have an understanding of bushfire behaviour, knowledge of the vegetation (bushfire fuels) and its impact on fire behaviour and landscape bushfire exposure.

It is recommended that this current review concentrate on the events, actions (or inactions) and circumstances that preceded the bushfire and were present at the time of the catastrophic bushfire rather than the specific actions undertaken by the IMT personnel. A bushfire running under extreme weather conditions in a moderate to heavy fuel load will exceed the capacity of the firefighters to directly attack the head fire. Any flank attack or indirect attack will result in larger areas being burnt and assets in the path of the fire being damaged or destroyed.

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Executive Summary

The CPSU/CSA, with the input from members in four agencies, has prepared this submission for the consideration of this Inquiry.

The union held a meeting with delegates from DPaW and DFES and sought responses from its membership. In all, well over 100 pages of responses were received from a wide cross section in both agencies.

Many of the key issues emerging from the responses would be familiar to anyone connected with the major inquiries and Major Incident Reviews held over the past decade. These are:

- The need to plan and resource a prescribed burning program based on the full suite of risk factors, including recognising the impacts of a drying climate, an expanding rural/urban interface, conservation of biodiversity values and the resources needed to carry out fuel reductions at a strategic scale and within the rural-urban interface.
- Simplifying prescribed burn planning processes. .
- Ongoing refinement of planning processes should continue to develop the best products.
- The impacts of cuts to staff, districts and resources (including training) at DPaW, and the corresponding generational change, lack of career development and limits on operational experience opportunities available in DFES significantly impact on pre-incident and fire response capabilities. There are some things you just can't outsource.
- The impacts of the lack of a shared, effective, web-based incident management system, including mapping, and common procedures across both DFES and DPaW.
- The need to continually improve resource management, reconnaissance and lines of command and communication at the incident.
- The impact of cultural differences between DPaW and DFES, particularly at senior levels in each organization.
- There are now insufficient numbers of staff and insufficient staff with the relevant training and depth of experience to fill all DPaW preformed IMTs.
- The gutting of staff from DPaW in particular, and the separation of what is now DER and the FPC from the old CALM agency has reduced the numbers and depth of experience available for both bushfire fuel management and incident response. This is exacerbated by the reduction in training opportunities while training courses are revised to meet national standards.
- The need for an aligned fire services agreement to reduce/eliminate complexity of different agreement conditions for staff of different agencies, and the lack of agreed, formalized conditions for volunteers.
- The use of private fire suppression contractors to replace DPaW staff roles not supported.
- Community engagement, both in terms of pre-incident knowledge, understanding and preparedness, and communications during incidents is essential in developing good decision-making capability in a fire incident.

Despite these issues, at the officer-to-officer level in the Waroona region and in specific teams such as mapping, interagency cooperation and collaboration is much improved and leading to better outcomes, despite the lack of shared systems and procedures. This is

occurring where the specific officers drive it, not by any strategic direction by either agency.

Recommendations

1. As a matter of urgency, address the issues raised by the inadequate number of staff in DPaW, and provide appropriate training and field-based learning opportunities to fill the IMTs without outsourcing these roles to contractors.
2. Increase resources allocated to prescribed burning programs by reviewing funding sources available and the most appropriate allocation of those funding sources.
3. Require both agencies to develop and implement as a matter of urgency mechanisms to foster collaboration and communication across all levels of the organization and the relevant teams, eg, regional centres, specialist teams.
4. Initiate talks across relevant agencies, unions and association stakeholders and their employees/members with a view to establishing common or parallel agreements covering both/all relevant agencies and volunteers involved in bushfire mitigation and management/response.
5. Follow correct lines of command and reporting in line with WESTPLAN Fire.
6. In both DFES and DPaW, finalise as a matter of urgency the current development of appropriate level bushfire-related training courses and roll out prior to the 2016/2017 fire season and improve access to training courses and 'shadowing' opportunities for staff development for IMT and other roles
7. Introduce electronic tagging/swipe systems for all vehicles, critical machinery and personnel involved in fire response, including prescribed burns as a part of progressing towards a share, effective incident management system, including incident mapping.
8. DFES to identify, develop and implement mechanisms to remove the blockages to career bushfire and emergency specialists to advancement in the organization, and to look at the current cultural divide within the organization.
9. Clarify and confirm the protection of staff operating in good faith in senior roles in the IMTs from litigation or prosecution.

Responses to the Terms of Reference

1 The Response to the January 2016 Waroona Fire

(a) The effectiveness of pre-incident bushfire prevention and mitigation activities

It is noted that some issues are relevant to more than one term of reference.

Key Issue: Prescribed Burning Planning

The Office of Bushfire Risk Management (OBRM) has been established as an independent body responding to the Fire Commissioner as an outcome of the second Keelty report. The OBRM sets out processes and templates (which have been endorsed by senior staff within DFES and DPaW staff) for the planning and endorsement of prescribed burning programs in line with ISO 31001 (Risk Management). The key issues raised by members in DFES and DPaW are:

- Role and function of the Office of Bushfire Risk Management (OBRM). On the DFES web site it is acknowledged that the creation of the Office of Bushfire Risk Management (OBRM) has led to some confusion. The OBRM mission is to enhance efficient and effective management of bushfire related risks. OBRM committed to creating a state bushfire fuel load policy when it disbanded the inter-Departmental and volunteer group working on the project. It can be argued that as a consequence of the catastrophic fires over recent years that OBRM has not achieved its mission. This is not solely based on the prescribed burning issue but rather on the holistic lack of impact from the creation of OBRM and the apparent duplication with Departmental procedures and practices. OBRM was created as a recommendation of the Keelty Review.
- International Standards: It is noted that a focus on international standards can become an exercise in form rather than content. Any review of the prescribed burning process should consider whether this is currently undermining outcomes.
- Operational experience. The OBRM needs staff with extensive operational experience, in addition to staff with complementary skills, in order to undertake its role effectively.
- Prescribed burning approvals process. The electronic prescribed plan templates differ in length and complexity between different agencies and land managers, despite all being endorsed and approved by either DPaW or DFES senior staff and endorsed by the OBRM. The current DPaW template requires a longer and more complex plan than that of other agencies such as DFES. The templates need to be reviewed, simplified and standardized across all agencies.
- Training. The existing training program does not yet use the AFAC (national) standard format. Currently the IBMC required a single prescribed burning training course to apply to both agencies, however with guidelines for implementation in each agency are different and therefore the intent of achieving common model of operation is made more difficult to achieve and denies the opportunity to have a nationally consistent approach.
- ISO 31000. If the need to meet ISO standards means that form rather than content is the key driver, is this achieving the intent of ensuring best practice in considering risk in prescribed burn planning?

Key Issue: Prescribed Burning Program

Managing fuel loads at the landscape scale, with a growing and complex rural-urban interface, means that prescribed burns, particularly those outside the metropolitan area, will be similarly large and complex, requiring significant logistics and resources over a period of days, if not weeks.

This may include multiple agencies and local governments, large numbers of volunteers and brigades, heavy equipment, air support and all other logistics.

Complicating factors include:

- Longer, more intense fire seasons in a drying climate
- Narrower windows of safe conditions in which to carry out burns
- More complex burn planning and approval processes as outlined previously
- Longer and more mosaic rural-urban interface
- Uneven fuel management across the various tenures across the landscape
- Community and media understanding, preparedness and expectations (addressed under our response to ToR 1(f))
- Availability of both staff and volunteers for long and complex prescribed burns
- Reduced willingness of DPaW staff to initiate complex burns in the wake of the Margaret River fire emergency outcomes.

As a result, the window for prescribed burning has reduced, the planning required has increased, and the complexity of the proposed burns has increased at the same time as there are less experienced controllers and less people available to undertake the burns.

The result of these factors requires a holistic review of prescribed burning planning, logistics, resources and management from across the range of perspectives, public private and community, to:

- Examine the risks of living in a bushfire prone environment
- Identify how best to achievably reduce fuels and protect lives and other assets, and
- What resources, human, digital and physical, are needed to achieve this
- What are the key factors in the difference between what was achievable in previous decades and what is achievable now

DPaW members have particularly acknowledged the commitment and support of Forest Products Commission (FPC) staff in both the prescribed burning and fire response teams. It is also noted that staffing levels within the FPC have also fallen significantly in recent years.

Key Issue: DPaW Staffing, Training and Resources

Key issues raised by our members include:

- Departure of long-term, highly skilled and experienced staff leaves a significant load on the shoulders on staff still developing their skills and burnout risk on the remaining highly experienced staff. Greater emphasis needs to be placed on recruiting, training, mentoring and exercising the next generation.
- A related issue is that the delays in implementing the upgraded training programs impact on the capability of the next generation to build their skills to take on roles within the IMTs. Refresher courses to maintain skills are also essential.
- Both staff in preformed IMTs and volunteers report that they have trouble gaining public sector employer approval to participate in non-emergency fire management, including prescribed burns and incidents that have been downgraded in status.
- The staff reward and recognition program introduced after the Keelty reports, included a financial incentive component, though this was dropped after one year due to perceived inequities. An appropriate rewards and recognition program should be developed using

the lessons from this first iteration. This is an important factor in staff willingness to participate, given the impacts on personal risk, families and personal time.

- Amalgamation of DPaW Districts into 'super districts' with lower staffing levels has also reduced capacity to undertake prescribed burns. In particular with fewer senior staffing based in the outlying offices away from the main administrative centre. It is unrealistic to expect a single District Duty Officer to undertake the same level of prescribed burns as two, three or four DDOs would have undertaken previously.
- Fire management, particularly bushfire management, comes with significant risk. Exposure to prosecution, litigation and damage to professional reputation are a significant discouragement to entering or remaining in fire management roles. Public sector workers acting in good faith in incident management need to be protected from prosecution or legal action. This is a particular concern for staff undertaking leadership roles, especially where these are in a voluntary capacity and not a formal part of their job description. The union has also had reports of members of the public entering workplaces to confront public sector workers in the wake of the Waroona fire. The legal uncertainty, coupled with the possible personal outcomes:
 - Reduce willingness to take on roles, especially leadership roles, in IMTs
 - Reduce willingness to initiate fuel management in all but the most straightforward of conditions.

- Member comment -

If Dwellingup was a district with the pre-district amalgamation staffing and crew levels would the fire have developed to the same level? Particularly if Jarrahdale and Harvey (neighbouring districts) were able to provide additional substantial fire suppression and management resources. Would the fuel loads have been the same if the district pre-amalgamation staffing levels had been retained and in a position to be applied to the prescribed burning program when weather and fuel conditions were appropriate?

Key issue: Funding for prescribed burning program

Currently DFES is the Hazard Management Authority for Fire; DPaW has no formal designation as an emergency service. This means that Emergency Service Levy funding is not available for DPaW's prescribed burning program. There is a clear and urgent need for additional funding adequate for the task. Options for exploration include increased recurrent funding or the extension of ESL funding, directly or indirectly.

It is also noted that it is currently unclear to what extent other agencies with lands under their management have any dedicated funding or resources to manage fuels on their lands (eg, Education, Water, Lands).

1 (b) The effectiveness of emergency management plans and procedures

There are strong cross linkages between the procedures used in bushfire fuel management planning and the strategies and tactics used in bushfire response.

The key issues identified by members include:

- lack of an effective, simple to use, shared resource management system accessible by multiple agencies, local governments and volunteer brigades
- In particular, lack of a web-based tracking system for personnel, vehicles and other critical equipment
- Importance of skilled, trained and practiced interagency preformed IMTs
- Limitations imposed by the current levels of staffing
- The complexities introduced by different agencies being employed under different fire agreement conditions, and the lack of equivalent conditions for volunteers, and
- Funding for prescribed burning activities

Key Issue: Lack of an effective shared management system

- Member comment -

"It doesn't matter which system we use, as long as it's shared."

This has been listed as a priority by all the major reviews and inquiries over the past half a decade. The current situation makes coordination between agencies difficult and handovers between agencies highly problematic, as the incoming team will use their own procedures in the operation and the procedures used in a single role can swap backwards and forwards between the two agencies' models with each shift change.

The State Emergency Management Committee's Bushfire Review Implementation Group last reported in August 2014, that a Bushfire Risk Management System that would be accessible by agencies, local governments and volunteers was 'in development'. At this stage our members advise they there is no sign of it being close to development, testing or deployment.

Currently both agencies make use of a mix of systems, some spreadsheet or web-based, as well as whiteboards and some paper based such as t-card and battleboard systems. At one stage DPaW trialled the use of the Victorian IRIS system, which at that stage did not include forward planning or fatigue management systems. It was identified that to use the IRIS system effectively would require detailed training and an in depth knowledge of the AIIMS.

The key criteria for a shared system include:

- Easy check in and check out
- Ability to calculate and report on fatigue /duration of shift
- Long-term forward planning (in the context of the incident)
- Web-based but also capable of operating when power and internet links go down

This needs to be progressed as a matter of high urgency as a State asset, including a shared mapping system. It also needs to be supported by comprehensive training available to all relevant stakeholders, including local governments and volunteers, and supported by the relevant tools and resources. Training should also provide pathways to further development and promotion, however, in DFES, as discussed, further career progression is not available for bushfire specialists.

Key Issue: Web-based Logging of personnel and equipment

Currently there is no system in DFES for remote tracking of either personnel or critical appliances (including machinery) at fire events, DPaW has GPS vehicle tracking for heavy fleet and plant but not yet accurate, live personnel tracking. The current T-card system used by both agencies is reliant on the accuracy of people checking in and out, which can be problematic with exhausted crews at the end of their shift, and on prompt filing of updates.

- Member comment -

*Real-time reporting of locations would be an ideal outcome.
If cost / practicality of real-time is not possible, 5 minute reporting would be preferred to current 10-15 minute reporting.*

In terms of personnel, this would increase safety of fire response teams and provide the Incident controller and IMT with more accurate knowledge of how long teams and individuals have been on shift, and which are rested and can be redeployed. It could also include practical items such as dietary requirements.

The first day, or two, of a major bushfire incident is always going to be hectic and complex, but without a simple, web-based tracking system, as in the Waroona fire, even by days 3-5, lack of this information means that teams are not being rested or redeployed in the most effective manner, increasing fatigue and creating a range of OSH issues. Improvements to resource tracking systems would provide improved resource allocation. This would also enable better planning of accommodation, food and resources.

In terms of vehicles and equipment, this would aid in coordinating and making the most effective use of resources. Having an adequate quantity of simple portable systems which can be installed into / attached to contract machines should be considered. Permanent installation of tracking devices should be undertaken on all dedicated fire appliances.

It is noted that vehicle tracking and personnel scheduling software is now common in resource companies, the taxi industry, waste management and other industries, and mobile swipe on/off technology is available and is used by most of the world's public transport systems.

A further consideration is the problems caused by communications technologies. Radio is the preferable option and should remain the primary communication channel as it is an open and public system that can quickly relay important information about the fire-line, however the terrain of the fire ground can limit operability. Mobile phones are ubiquitous and can play a role as a back-up source of communications, should phone towers be fire damaged.

Key Issue: Skilled Interagency Preformed IMTs

In relation to planning and preparedness, interagency teams need time and prior operational, field-based experience to work well once an emergency is declared. Prescribed burns are an acknowledged, effective way for teams to build confidence and trust and for systems to be tested to identify and implement improvements before being exposed to a bushfire emergency.

Local knowledge is integral to effective fire management and therefore has a role within preformed interagency teams. In the Waroona-Yarloop area, effective relationships with local brigades and local government officers built up over time and playing to each agency's strengths were an important facet of efforts to bring the fire under control. This varies across different regions within the Southwest of the State. Engagement of volunteers and local government in preformed teams will improve outcomes.

Again, the comments made previously about the importance of staff being permitted to participate in non-emergency fire management as well as fire emergencies are relevant here.

An additional complexity in the development of interagency preformed teams includes the need for a clear common language with a clear set of common definitions.

The need for common or parallel conditions is discussed elsewhere in this submission, however it is noted that lack of common shift/rest times further complicates the smooth running of interagency preformed IMTs.

It is noted that DFES is yet to complete and roll-out its planned bushfire situation course. Nor are any advanced bushfire training courses, or ongoing professional development, yet available through DFES. It is also noted that participation in some training courses is limited to commissioned officers and not available to other staff such as bushfire specialists. The internal, highly structured nature of DFES based on hierarchy rather than experience undermines outcomes.

This situation highlights the dualities of bushfire management and suppression roles within the command model operating at DFES, which focuses training, advancement and opportunities on commissioned (or trainee) officers. While DFES has a role in bushfire management, which requires a very different skill-set to the traditional structural fire suppression focus of the majority of DFES incidents.

Training for IMTs

Sound training is critical to any IMT, but particularly for interagency IMTs coming from different organisational cultural backgrounds. This is necessary not just for the major agencies discussed here, DPaW and DFES, but also for the many agencies with land management roles such as Lands, Water, Main Roads to name a few.

The point made previously about delays in developing the upgraded training limits opportunities for staff willing to take on IMT roles, or advance into higher levels within IMTs, to fill the roles being vacated.

Some managers have created opportunities for staff to shadow different IMT roles during incidents as an important component of training, however this should complement not replace professional training.

It is noted that DFES appears to have ceased further development of the Bushfire Situation Course.

Creation of a DFES Regional Training Coordinator who works across agencies would assist in this process. A holistic approach would also include better pathways for more public sector workers to volunteer for roles in preformed IMTs, including in fire support roles where it is equally important to have trained, competent and quickly available personnel.

Key Issue: Limitations due to current levels of staffing in DPAW

This was covered under the response to Term of Reference 1A. The comments made are equally valid here.

It is noted that DPaW has been subject to additional pressure to reduce staff and cut costs in the last 12 months. The union does not have access to the full figures of the losses and this information would need to be requested from the agency.

An additional point is to note than in DPaW, staff may not only be on multiple preformed team rosters, they may also be on a range of other rosters, including District rosters, aviation rosters, State Mapper rosters and have their time tightly scheduled across the full summer period, reducing capacity for rest and increasing the likelihood of burnout and fatigue.

There are two important points to be made here: more staff are needed to ensure preformed IMTs are fully staffed, but equally important, all staff in preformed teams need to have good levels of fire competency. This is not just about training, but also about participation, including in logistics and planning roles.

Key Issue: DFES Staffing and Resources

It is noted that although DFES Fire Fighters are outside of the CPSU/CSA's coverage, many of our members employed at DFES are involved in both prescribed burning and emergency bushfire response roles. Some are involved in specialist bushfire roles, operational or logistics roles and others are also volunteers either in Volunteer Fire and Rescue Brigades or Volunteer Bushfire Brigades.

Some of the key issues raised by our DFES members include:

- Lack of opportunity for career progression limits the opportunities for bushfire (and emergency) specialists to progress within the agency to senior roles. This reduces opportunities to recruit and retain high performing staff.
- It also creates a 'second class' within the organisation's culture. A practical example of this is that bushfire specialist staff have no access to training programs that are relevant to their roles but can only be accessed through the station officer development program, from which they are excluded.
- The current recruitment freeze means that there is no opportunity for staff to be recruited from other agencies, such as DPaW, other States, or from highly skilled and experienced volunteer brigade members.
- The move to national accreditation standards appears to have slowed.

Within DFES only one of the Deputy Commissioners or the Commissioner has skills in landscape bushfire management. Within DFES there has been the creation of a very large number of senior

positions which now has two Deputy Commissioners, six Assistant Commissioners, seven Chief Superintendents, 25 Superintendents and many additional Branches and Directorates in the corporate section, and a structure that aligns closely to the Police structure. The current DFES requirement is that all Assistant Commissioners must have attained the rank of District Officer, this creates a barrier to specialists in both bushfire and in emergency services, including in the regions, from progressing their careers.

Key Issue: Complexities due to different fire agreements.

Currently, fire responders in DPaW and DFES are subject to different fire agreements with different conditions, including different shift lengths and rest periods, to name a few key elements. This adds complexity to the planning and deployment of personnel at the fire ground, as well as during planning exercises.

A common agreement is not the whole solution. Adequate numbers of staff to fill rosters, and adequate training and field experience for all officers is also essential.

Volunteer fire fighters are not currently covered by an agreement, according to the AVBFB. Members who are volunteers have noted that they often pay for equipment (for example, heat resistant torches, rather than standard issued plastic torches that melt in the heat) and often take unpaid leave to fight fires. It is noted that volunteer brigade members do not even receive a stipend such as that received for jury duty.

Members who are volunteers have noted that there can be frustration when paid agency staff leave the fire ground at the end of their shift and the volunteers are expected, or feel they are expected, to continue.

As a union concerned with public service and fair working conditions, this is not acceptable.

The agencies, relevant unions and their members, the volunteer associations and their members should initiate talks with a view to reaching a common or, alternatively, a parallel agreement on conditions.

Key Issue: Funding for DPaW's Fire Response

Currently DFES is the Hazard Management Authority for Fire; DPaW has no formal designation as an emergency service. Volunteer brigades also benefit from the Emergency Service Levy funding and rightly so, however, ESL funding is not available for DPaW's fire response costs and, in fact, DPaW has received funding under the Royalties for Regions program to cover what should be considered core costs.

Significant additional resources are needed to fund DPaW's bushfire mitigation, management and response costs. This could be achieved either through a significant increase to DPaW's recurrent budget, or through direct or indirect access to ESL funding. It should also be noted that funding needs to be matched with the appropriate levels of personnel to achieve the outcomes sought.

1 (c) The effectiveness of the suppression strategies and tactics used during the fire

In a sparsely populated state, fire management and suppression resources will necessarily be spread out and require more time to gather than in more densely populated areas.

In the specific instance of the Waroona fire, members identified a number of factors that worked well and aided in the effective management of the incident. These included that the interagency preformed IMT worked very effectively together, with a good level of communications and a high degree of respect between team members.

Success factors included:

- Strong, positive inter-relationships that had been deliberately fostered by regional staff in DFES and DPaW, as well as with Local Government and local volunteer brigades.
- The high degree of trust developed through these relationships
- Team roles allocated to play to the different strengths and skill-sets of the agencies and their local staff

CPSU/CSA members also identified a number of issues that undermined effective incident management and are key opportunities for improvement. These are:

- Lack of a shared incident management systems
- Clear and appropriate lines of authority and command
- Improved reconnaissance
- Concerns about the role of private fire suppression (fire fighters) contractors
- Possible development of a bushfire rapid suppression team (noting that we have received arguments both for and against this idea from members)
- Approval to attend fires (including for bushfire volunteers employed in the public sector)

Community expectations of fire services, and the outcomes achievable in a major fire incident, can often be unrealistic. Media reportage and images of water bombers creates a perception that enough fire bombers can extinguish even intense bushfires. There is also a sense that bushfire risk applies to homes in rural or bushland properties, not homes in town sites, a misconception sadly brought into sharp focus in Yarloop. This issue is dealt with in further detail in the response to ToR 1 (f).

The lack of a shared IMS has been addressed under the response to ToR 1(b).

It is noted that the development of a second incident in the same region at Clifton Beach also created confusion at some stages.

Key Issue: Clear and Appropriate Lines of Authority

It was noted that in some instances during the Waroona fire, the roles, responsibilities, including decision-making, did not appear to be in line with Westplan – Fire (s4.5, p28) or as per the AFAC endorsed IMT roles.

This has been a persistent problem in multiple fire incidents where, regardless of the agency leading the fire response, SOC provides directions to its officers based on the aerial intelligence

they receive. This negates the IC's control of the situation, where he or she is drawing on both remote intelligence and specific factors such as terrain and micro-scale weather conditions.

One factor identified by members that can be a hindrance to smooth communication and collaboration is the difference between best practice public sector management and the command structure of the fire service. The differences can create tension in the management of the IMT.

A related issue is the vertical, hierarchical communications in DFES can limit relationships and the provision of frank and fearless advice between agencies. Members noted that this did not apply across the board as some DFES fire fighters made particular efforts to work in collegial relationships across agencies.

Key Issue: Improved Reconnaissance

The need for rapid, accurate intelligence and detailed plotting of the fire perimeter cannot be overstated. Members have identified four opportunities for improvement:

- More rapid and direct communication of air intelligence
- Improved scanning and plotting of the fire shape, perimeter, rate of spread and the fire run direction regardless of time of day or smoke cover
- Consideration of air attack as well as air reconnaissance capability
- Need for a common mapping system.

At the Waroona fire, the intelligence provided by aircraft was relayed via the State Operation Centre at Cockburn before reaching the IMT in Waroona. Further delays can happen if the line is complex and needs a number of runs to complete. In this case, data is held by the SOC until all data has been received and processed. The data and communications systems need to be further developed so that the IMT receives intelligence concurrently with SOC.

The mapping system used by DFES is well regarded and could provide the basis for a shared mapping system. It is also noted that there is still a need for paper maps/map book specifically designed for operational purposes.

Improved reconnaissance will also improve public warnings and messaging during crucial stages of the fire, potentially saving lives.

Key Issue: Use of contractors

Private contractors play a number of roles in fire management, including the provision and use of heavy vehicles, plant and water carts.

The union does not support the use of contractors to replace public sector staff roles. Where contractors have been traditionally used, there needs to be an accreditation and training program backed by ongoing refresher training. It is noted that senior incident controllers have a working knowledge of reliable and experienced contractors, however with generational change in both agencies and contractors, now is an opportune time to provide structure and clarity for future incidents.

Key Issue: Rapid Response Bushfire Suppression Team

On this issue, we have received both strong support for, and strong support against the idea of a 'hot shot' rapid suppression team based in DPaW to respond to small, remote fires in strategic locations. The union would need to further canvass its members to reach a position on this issue.

Key Issue: Release of staff for fire incidents

Members in volunteer brigades have remarked on the difficulties in accessing leave to attend fires, including Waroona. This includes approval as well as access to paid or unpaid leave and, in one instance, a member was questioned by their public sector manager as to the need to remain at the fire once the emergency level had been downgraded. This same manager was reluctant to allow the staff member permission to leave the workplace to extinguish spot fires on their property.

- Member comment -

There have been very few new 4x4 heavy fire appliances purchased for the on ground career bushfire firefighters. The standard large 4x2 firefighting trucks, which are the regularly supplied large truck, cannot be used off road. There has been insignificant improvement in the supply of fire appliances to the bushfire volunteers.

Other issues

At a practical level, members noted that difficulties were experienced with the supply of fire retardant. Mixing the retardant is subject to stringent OSH procedures for the safety of staff. Insufficient supply was available which required more retardant to be mixed in Cockburn and transported to the fire responders. Consideration needs to be given to system improvements to avoid similar issues in future major fire incidents.

1 (d) The effectiveness of incident management, including coordination of agencies, volunteer fire and emergency services and interstate assistance

The key issues relevant to this term of reference have been largely covered in other sections.

These include

- Lack of shared management system
- Web-based logging of vehicles and personnel
- Skilled interagency preformed IMTs
- Different agreements on conditions
- Differences in communication styles/models

In terms of interstate co-ordination, it was noted that the Victorian contingent were well organized and equipped, but that the additional resources and time needed to brief them and integrate them into the fire response created additional tasks.

Some differences between DFES and DPaW that contribute to difficulties in interagency collaboration may include that DPaW has a decentralised model focused on flexibility and the ability to delegate. Positions within the IMT are based on experience and sometimes do not follow hierarchical employment levels. DPaW members in logistics and planning roles have sought to train for and fulfill different roles within IMTs, ensuring a good understanding of the needs and pressures on different team roles.

For both agencies, there can be personnel in roles in the planning and logistics who have been trained for these roles but have limited field experience in major incidents. This is particularly the case for younger/newer members of staff.

Past reviews have noted the importance of prescribed burns in the training and team building for operational staff. Apart from the more limited extent of prescribed burns in recent years, those that are run often are done with minimal planning or logistics support, thus further limiting the opportunity for staff to develop skills and confidence.

1 (e) Protection of essential services infrastructure and access to essential services (power, transport, water, communications) by emergency services organisations and the community

One of the key issues raised by our members relevant to this term of reference is the crucial importance of real time mapping. Currently both agencies use different systems.

DFES has good mapping data, including the location of essential services, however, limited access for DPaW, local Government and volunteers diminishes its effectiveness during fire incidents such as Waroona. The DPaW mapping system has a different focus and includes a wider range of base layers and has the advantage integrated with spatial tracking of vehicles. It is essential that a single high quality mapping system that receives real time data from aerial scanning and reconnaissance.

Moving to a single system is linked to the resolution of a single incident management system. As an interim measure, consideration should be given to:

- resourcing log-ins and training for DPaW mapping staff to be able to use the FESMaps
- enabling DPaW digital tracking of vehicles be integrated with FESMaps
- Installing digital trackers on DFES vehicles

Communications

The DPaW mobile Pantech unit was put into operation in February 2010 and provides corporate server access, mapping and scanning technology based on self-aligning satellite. This has improved access to data but has also introduced complexities as it is effectively a stand alone server, requiring different logins to connect to other agency servers, such as those at Kensington or Mundaring. This can lead to confusion as to which server information has been stored. Additionally, there can be confusion about which server they are logged into (personal log-in or role-based) and to which server information is saved.

Currently the shutdown procedures at the end of an incident do not include automatic back up of the data on the mobile server to the main server.

This is a simple process improvement that can be implemented.

It is noted that in the last few years, DPaW has considerably expanded and improved its mobile command centre, which can be fully set up within 6-12 hours.

1 (f) The effectiveness of public messaging including the adequacy and timeliness of emergency warnings issued to residents and visitors

Members identified a number of opportunities for improvement in relation to messaging, some of which relate to the rapidly changing ways that people seek and gain information, particularly through social media, some of which relates to people's exposure to and understanding of fire behaviour.

Pre-Incident

Fewer people in the general population, especially those from a non-rural background, have exposure to fire and therefore to fire behaviour than previous generations. Most people's experience with fire and fire behaviour now comes from the media.

Members working in the call centre during the Waroona Fire receive complex requests for information from the community, which they then have to seek from the IMT to be able to respond to the caller. Sometimes the calls clearly indicate the low level of knowledge and preparedness, including a query along the lines of "I can see the flames from my house. Should I evacuate now?"

- Best practice community behaviour change principles identify that opportunities for active learning are more effective than information provision alone. Few if any people will change their behaviour based on seeing or reading information, whether on a brochure or a web-site. A scan of part major reviews around community engagement has identified two factors:
 - A belief from the agencies that provision of information is sufficient for people to understand the risks of living in rural and regional areas, even within townsites,
 - Public perception about the role of fire response agencies, including equipment such as water bombers and potential outcomes in saving homes and lives.
- Therefore there is a need for more Community Education Officers in bushfire risk prone areas to work with the community to develop an active understanding of the risks, both at a general community levels and at the property and individual level. This would also include developing realistic expectations of the level of fire response possible.

It is noted that no amount of improved communications technology can replace the need for the public to be able to make their own considered decisions about whether to stay or to go.

- Member comment -

We need to be honest: we will do our best, but we can't make promises.

In a fire emergency

During a fire emergency, community members have a real and urgent need for accurate, up-to-date knowledge.

We have previously identified the lag phase between aerial reconnaissance and the information reaching the IC. After which there is a further delay as it is communicated to DFES' media team who are hard-pressed with current resources to meet a one hour turnaround for updates.

As well as managing community expectations in the pre-fire season, there are some options that could be explored to improve communications outcomes:

- In a similar manner to the formation and training of preformed IMTs, a call could also be put out for public sector volunteers to be trained to take support roles during a fire incident and to go on a database or roster during the fire season.
- Media channels – it is becoming common for local Facebook networks to share information (whether correct or not) during a fire emergency, often using information collected from radio scanners. A review of communications during fire incidents is warranted to ensure currency in a rapidly changing social media network. It is noted that currently the link to Facebook from DFES is simply the opportunity to post current warning to your own Facebook page.

Employer release of staff for volunteer fire duties

Although there is emergency services leave built into the current general agreement for public sector workers under our coverage, the reality is that there can be challenges in gaining approval for a release from work commitments to attend fires. The State Government needs to raise awareness within executive and manager levels of the State's public sector of the importance of allowing staff to participate in both bushfire mitigation and response activities.

2. Lessons learned from previous bushfire emergencies

(a) The extent to which the findings and recommendations of the following Western Australian bushfire reviews undertaken since 2011 have been implemented:

- (i) A Shared Responsibility – Report of the Perth Hills Bushfire February 2011 Review (Keelty, 2011);
- (ii) Appreciating the Risk – Report of the Special Inquiry into the November 2011 Margaret River Bushfire (Keelty, 2012);
- (iii) Post-Incident Analysis of the 2011 Margaret River and Nannup bushfires (Noetic Solutions, 2012);
- (iv) Parkerville Stoneville Mt Helena Bushfire Review (State Emergency Management Committee (SEMC, 2014) ;
- (v) O'Sullivan and Lower Hotham Bushfires Review (SEMC, 2016); and
- (vi) The Western Australian State Emergency Management Committee Preparedness reports.

The various reports, and responses to reports, not including appendices and attachments, cover well over 1000 pages and several hundred recommendations. Table 1 groups these recommendations by topic, which are reasonably well-aligned with his enquiries terms of

reference. One topic alone, the lack of a shared incident management system, is the subject of 52 different observations, recommendations and key finding from the above-mentioned reports. Nour Report on the Lower Hotham and O'Sullivan fires noted that there has been limited action on these core issues and identified both key enablers for collaboration, and the key barriers working against collaboration.

2 (b) The effectiveness of reforms implemented by the State since 2011 on the State's ability to prevent, mitigate and respond to major bushfires and the community's understanding of and preparedness for bushfire risk.

When the union called a meeting with its members from the key agencies, DPaW and DFES, and also sought to consult with key volunteer associations, we were uncertain as to the extent of common ground. What we found was almost entirely common ground.

We found members in different agencies building interagency collaboration and relationships to patch around the barriers higher in their agencies.

We found that poor resourcing and systems due to lack of funding, the loss of experienced staff and barriers to the next generation training for key roles hamstrung the agency with the most direct and extensive experience of bushfire mitigation and management.

We found that the agency with the best systems and resources was the agency with the least experience in bushfire mitigation and management, and that it had barriers to recruiting and retaining bushfire specialists, as well as systems of command and interaction that hampered and undermined collaboration.

And we found that members in both agencies clearly recognised that the system is stuck in a 'ground-hog day' loop that strengthened officer to officer collaboration can only go so far to address. And it seems that repeated inquiries and reviews, other than some of the key changes initiated and resources following the second Keely report have done little to create effective change.

3 The need for further reform.

Given the above, further reform is urgently needed.

It is clear that bushfire risk is increasing and the issues identified here and in past reviews increase the risk of adverse outcomes.

Single Bushfire Management Agency

A number of the issues highlighted in this submission relate to differences between the multiple agencies and players within the bushfire management and response systems in WA: lack of a shared system, cultural differences between agencies, different priorities, time-scales, staff agreements to name a few.

One solution for consideration could be the establishment of a country fire authority; however this would require full scoping and support from a range of stakeholders including our members. Currently the union has no formal position on this and would need to take advice from our members.

It is noted that there would remain a requirement for a strong, well-funded fire management structure within DPaW to ensure that the State's natural assets are protected and enhanced. DPaW need to be able to burn its estate for biodiversity, regeneration and community protection. Much of the biodiversity burning is complex and a specialist role.

If this is a consideration, the CPSU/CSA requests that the union is involved at the earliest opportunity before any recommendations are made as we are aware of divergent views among our members.

ATTACHMENT

Table 1: Summary of recommendations and findings from past reviews and inquiries by theme.

Theme (not in any order at this stage)	References
Instruments (Statutory, regulatory, policy)	Ferguson observations: obs 1, 2, 10, 13, 14 Keelty (PH): rec 1, 2, 4, 25, 31, 40, 43, 44, 47, 48, 50 Noetic (MR): Lesson 29, 39, Nous (LH&O'S)
Systems, including risk management	Ferguson observations: obs 2,3, 5, 7, 8, 9, Keelty (PH): rec 15, 21, 22, 23, 24, 26, 27, 29, 32, 49, 51, Keelty (MR): rec 1, 2 Noetic (MR): Lessons ¹ 2, 3, 4, 7, 12, 13, 14, 18, 19, 23, 24, 25, 26, 28, 32, 34, 37, 42, 43, 46, 47, 48, 49, 50, 51, 52, 53, 54, 56 Nous (LH&O'S) key Findings 2, 3; Rec 7.1, 7.2.3
Planning	Ferguson observations: obs 4, Keelty (PH): Rec 3, 13, 25, 39, Keelty (MR): rec 1 Leeuwin-Nat Ridge Man Plan
Cultural differences	Ferguson observations: Keelty (PH): Noetic (MR): 35, 38, 44, Nous (LH&O'S) Key findings 2, 3, Rec 7.1, 7.2.3

¹ Noted that Noetic Reports include tabulated lessons, most of which have associated action, however, despite having a column titled "Responsibility", there are no responsibilities listed for any lesson or action, even when the text clearly identifies one or more responsible agencies.

Theme (not in any order at this stage)	References
Governance, roles & responsibilities, lines of command, including perceived as well as actual	Ferguson observations: obs 11, 12, Keelty (PH): 45, 46, Keelty (MR): rec 1, Noetic (MR): Lessons 14, 16, 20, 22, 29, 30, 33, 34, 38, 41, 44 Nous (LH&O'S): Key finding 3, Rec 7.2.2
Communication/liaison/collaboration/partnerships with other stakeholders and local knowledge inclusion during incident	Ferguson observations: obs 7, 14, Keelty (PH): rec 12, 29, 30, 32, 33, 34, 35, 36, 41, 49, 52 Keelty (MR): rec 6 Noetic (MR): Lesson 1, 8, 14, 19, 20, 21, 22, 27, 30, 34, 35, 40, 41, 42, 44, 45, 46, 47, Nous (LH&O'S): Key finding 2, Rec 7.1
Staffing/resourcing levels/succession planning/reward & recognition/ training	Ferguson observations: obs 5, 6, 7, 8, 16, 17, Keelty (PH): 49, 52, 53, 54, Keelty (MR): rec 5 Noetic (MR): Lessons 10, 11, 14, 15, 16, 17, 18, 23, 35, 47 Nous (LH&O'S): Key finding 1
Fuel management including Prescribed Burning	Ferguson observations: Keelty (PH): rec 13, 15, 18, 19, 20, 23, Keelty (MR): rec 2, 7 Noetic (MR): Lessons 3, 6, 7, 8, 9, 32, 41, 57
Community – awareness & understanding, preparedness, skills, perceptions	Ferguson observations: Keelty (PH): rec 6, 7, 8, 9, 10, 11, 49, Keelty (MR): rec 8 Noetic (MR): Lessons 48, 49, 50, 51, 52, (NB: all re communications during fire incident – alerts, warnings, updates, evacuations, channels etc)

Theme (not in any order at this stage)	References
Fuel Mapping	Ferguson observations: Keelty (PH): 18, 21 (note: recommends DEC, FESA & LG develop shared integrated system = OBRM?), 23, 38 Keelty (MR): rec 4 Noetic (MR)
Equipment and resources	Ferguson observations: 14, 15, Keelty (PH): 28, 41 Noetic (MR): Lessons 5, 12, 18, 26, 35, 36, 37, Nous (LH&O'S): Key Finding 1
Carry out independent review/Implement previous independent review recommendations	Keelty (PH): 24, 55 Keelty (MR): Rec 3 – implement Ferguson, rec 9 & 10 – carry out independent MIR of this and future major incidents Noetic (MR): Lessons 55
Recovery	Keelty (PH): rec24, 36, 37 Noetic (MR): Lessons 53, 54, 55, 56, 58
Climate change	Keelty (PH): rec 42