



## **KATOOMBA/LEURA VOLUNTEER RURAL FIRE BRIGADE**

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## **SUBMISSION TO THE NSW INDEPENDENT BUSHFIRE INQUIRY**

### **KATOOMBA / LEURA BRIGADE RURAL FIRE SERVICE**

#### **INTRODUCTION**

Thank you for the opportunity to make a submission to the NSW Government's Independent Bushfire Inquiry.

This submission is based on the experiences of our members during the historic 2019-20 bushfire season.

We are proud members of the NSW Rural Fire Service (RFS) and have deep respect for what the Service has achieved this fire season and what it represents to the people of NSW.

We make these recommendations to contribute to the ongoing improvement of bushfire management in NSW, towards the ongoing organisational improvement of the RFS and to contribute to the safety and welfare of volunteer firefighters.

#### **ABOUT KATOOMBA / LEURA RURAL FIRE BRIGADE**

Katoomba / Leura Rural Fire Service is a Brigade of the Central Sector in the RFS Blue Mountains District of NSW.

Founded in 1965 the Brigade currently has 50 active members with a total of 928 years brigade experience among its members in bush firefighting.

The Brigade was heavily engaged in the 2019-20 bushfire season contributing 10,337.3 hours in bush firefighting efforts, and its members served right across the state in out of area deployments and locally in the Blue Mountains.

This contribution included 784 days, or over 2 years of time, spent by our members directly fighting fires.

During the fire season, Katoomba / Leura Rural Fire Service operated back to back day and night crews 24 hours a day for an eight-week period. This exceeded our previous record of four weeks nonstop operations in the bush fire season of 2001-02.

We would like to remind the inquiry that RFS volunteers don't fight fires for free, we volunteer our time to the community. We are not a cheap commodity to be used up and thrown away. Our time comes at a great cost to ourselves, our families and the community. For volunteerism in Australia to thrive, RFS firefighters need to be respected and looked after.

## **AVAILABILITY OF BUSH FIRE FIREFIGHTING APPLIANCES**

The 2019-20 bushfire season clearly demonstrated that the RFS does not have enough serviceable firefighting appliances. To illustrate why this is a problem let us explain our own Brigade's experience during the fire season.

In September 2019 Katoomba / Leura's category 1 fire tanker (Cat 1) and crew were deployed to northern NSW as part of an out of area task force.

Once our crews had returned after their deployments, our Cat 1 tanker remained in northern NSW and was crewed by other RFS firefighters, and eventually firefighters from overseas.

While we acknowledge this arrangement was necessary to meet the immediate firefighting needs of the north at that time, despite our concerns and inquiries, our Cat 1 failed to return to our district even as the fire threat of the summer months approached and our own towns were in danger.

The Blue Mountains is one of the most fire prone regions in the world and our primary fire tanker was sorely needed to address our local threats and to protect our communities.

In fact, our Cat 1 tanker, the Brigade's primary response vehicle was not returned to our Brigade until March 2020, long after the fire threat had ceased.

This meant that Katoomba / Leura RFS had to face no less than seven major bush fire emergencies in our district, three of which presented existential threats to the entire Blue Mountains community, the worst bush fire threat the Blue Mountains has ever experienced in our history, without the use of our primary response vehicle.

This seriously undermined the operational capability of the Brigade and had a significant impact on Brigade morale. We are aware that several other Blue Mountains Brigades were in the same position being deprived of their Cat 1 tankers, with a similar impact on their morale.

To compensate, we were provided with an old, smaller Cat 7 tanker from another Brigade. However, this vehicle was not road worthy. It had a broken handbrake, and a compromised heat seal beneath the crew leaders' seat, which increased the amount of heat stress and fatigue the crew leader experienced.

Given the desperate nature of those days in November, December 2019 and January 2020, we were forced to make do, and despite repeated breakdowns and defects, continued to operate that Cat 7 and our own Cat 7 to contribute to the firefighting effort.

When our Cat 1 tanker was returned to us after six and a half months, it was damaged, in extremely poor condition and riddled with defects requiring significant repairs.

We have deep concerns as to the reliability of our Cat 1 primary firefighting appliance going into the next fire season which is a deeply demoralising prospect for our Brigade.

## RECOMMENDATIONS

With the length and breadth of the fire season across NSW, and the extended period of deployment required by RFS crews to mitigate it, it is clear that the RFS needs a reserve fleet of fire appliances not directly attached to Brigades, but ready and available to provide surge capability at times of great need in specific regions.

**Recommendation – that the RFS develop and maintain a reserve fleet of firefighting appliances to provide surge capability during periods of high firefighting need.**

**Serviceability of vehicles** – The continuous breakdown of fire appliances was also a major issue this fire season. At no previous time have our appliances been pushed harder than they were during the 2019-20 fire season. Many of them were in 24-hour operation for several months. Understandably, this led to a high number of breakdowns which undermined Brigade operational capability and reduced the availability of much needed firefighting resources during periods of heavy activity.

While existing repair facilities did their best, the turnaround time for these operations was simply not sufficient for the damage done. Our own Cat 1 was tied up for several weeks after being in northern NSW while \$18,000 worth of repairs were carried out. We needed that vehicle back in the line to contribute to local bush firefighting efforts in the Blue Mountains. When it was returned too late, it required significant further repair and it still not ready for operations as of late March.

Additionally, the state of our vehicles was such that we have had multiple breakdowns in the field which have had to be addressed by 'bush mechanic' ingenuity to keep these vehicles in the field and firefighters safe.

The RFS mobile repair capability (mobile mechanics) should also be dramatically increased, so firefighting appliances can be repaired in situ without the need to pull the tanker out of the line and away to another far off location for repairs.

**Recommendation – that the RFS significantly upgrade its contracted repair facilities and capability to repair firefighting appliances and return them to the fireground in a shorter turn around period.**

**Recommendation – that the RFS significantly increase its capacity to repair firefighting appliances in the field through the use of mobile mechanics or mobile workshops.**

## **SAFETY OF BUSH FIRE FIREFIGHTING APPLIANCES**

This bushfire season has revealed the clear deficiencies in the safety of our bush firefighting appliances for our volunteer firefighters. These deficiencies consist of three main categories:

- Lack of rollover protection of firefighting appliances.
- Lack of efficient fire protection sprinkler systems or ‘cabin sprays / ‘halo bars’ for older firefighting appliances.
- Lack of drop-down cabin fire screens for older firefighting appliances.

### **Lack of rollover protection of firefighting appliances**

Many near misses or accidents which have injured or killed firefighters have involved trees falling on vehicle cabins or vehicle rollovers.

Without pre-empting the outcomes of the coronial inquests into the deaths of firefighters Andrew O’Dwyer, Geoffrey Keaton and Samuel McPaul, all were killed in accidents which involved vehicle roll-overs. These deaths may have been avoided if those vehicles had been adequately retrofitted with internal cabin roll over protection systems.

### **Lack of efficient fire protection sprinkler ‘cabin spray’/‘halo bar’ systems for older appliances**

While firefighters make every attempt to avoid a situation where their vehicle is overrun by fire, the increasing volatility and ferocity of bush fires has made this an increasingly likely occurrence.

Unfortunately, many older firefighting appliances are equipped with umbrella sprays for ‘cabin protection’ which blow off the vehicle in wind, they are not equipped with ‘cabin protection halo bar sprays’ which are far more effective. These systems can be absolutely invaluable in the instance of an overrun and can be instrumental in saving firefighters lives. The halo bar sprays must be able to be activated from inside the cabin by firefighters without requiring firefighters to exit the vehicle, particularly in the midst of an overrunning fire.

### **Lack of drop-down fire screens for older firefighting appliances**

Drop down reflective fire screens, installed across front and side passenger cabin windows can be invaluable in saving firefighters lives in the event of a bush fire overrun. Older firefighting appliances do not have these systems installed.

### **RECOMMENDATIONS**

While we acknowledge that roll over protection, fire protection halo sprinkler systems and drop-down fire screens are installed in the newest RFS tankers currently being rolled out, a very large number of existing firefighting appliances in the RFS fleet **do not** have these invaluable, lifesaving systems installed.

Additionally, only a very small number of new or refurbished Cat 1 tankers are rolled out each year. According to the RFS Annual Report 2018/19, of an RFS tanker fleet of 3,820 **just 61 new or refurbished Cat 1 tankers** were added or replaced in the fleet in that year.

If the RFS is relying on the roll out of new Cat 1 vehicles to eventually ensure all Brigades are equipped with roll bars, halo sprinkler systems and drop-down fire screens, at this rate of replacement, it would take approximately 62 years for the entire fleet to be replaced.

Clearly, this is not an acceptable solution.

What is of greatest concern is that there does not appear to be any program targeted at retrofitting these tankers to improve their safety for volunteer firefighters, and the RFS appears to only be introducing these upgraded safety measures with the gradual roll out of the new fleet, over an unacceptably long number of years.

This leaves large numbers of volunteer firefighters with existing older vehicles dangerously exposed to injury and death in the absence of these lifesaving systems for the coming fire seasons.

For many firefighters it could be years, if not over a decade before they benefit from operating in vehicles with these much-needed basic protections.

**Recommendation – that the RFS undertake a comprehensive program to retrofit older RFS firefighting appliances with rollover protection, drop down fire screens and halo bar fire protection sprinkler systems as a matter of urgency.**

### **FATIGUE MANAGEMENT**

Fatigue management was an extraordinarily difficult issue for the Brigades to manage this fire season; not only on the basis of individual shifts, but across the entirety of the fire season.

While every attempt was made to generally keep crew shifts to a maximum of 12 hours, it was not unusual for day and night shifts to extend to 14 and sometimes 16 hours at a time with travel to and from the fireground.

These extended shifts occurred because in many cases it was simply not possible to leave the fire unattended; the fires breached containment lines at the end of a day / night shift or replacement day crews were delayed by briefings / feeding and were unable to relieve night time crews who were left in the field for an extended period of time.

This did not include additional travel time that some members had to add traveling home after their shift had finished.

Clearly, this presented a significant workplace, health and safety risk to firefighters who were often operating in adverse conditions, undertaking work of an extremely physical nature.

As the fire season progressed it became increasingly difficult to crew night shifts as these took a particularly heavy toll on firefighters. Our Brigade considered splitting night shifts into an 6pm to 1am shift and the 1am to 8am shift but we simply did not have the available firefighters to undertake this staffing structure and the logistical difficulties of transporting replacement crews to the location of trucks out in the field made this crewing system extremely difficult to implement.

As a result, firefighters and drivers continued to operate in circumstances where they were heavily fatigued and under great stress. It is extremely fortunate that these factors did not result in serious injury or death.

As the fire season wore on, a heavy physical and mental toll was taken by Brigade members who, to their credit, continued to turn out ensuring our Brigade was able to field a crew at all times when requested.

**Recommendation – that the RFS carefully review its fatigue management policy and put in place measures to protect the safety of firefighters like dedicated 4WD transports to take crews to and from the fireground.**

## **IMPACT ON VOLUNTEER FIREFIGHTERS LIVELIHOODS**

Katoomba / Leura RFS firefighters were deployed across NSW on multiple firegrounds from August 2019 to February 2020. In total the Brigade completed 10,337.3 hours over the fire season, an average of 1476 hours per month or approximately 369 hours per week.

Of this time, 784 days of time, over two years worth, was dedicated by our members directly to fighting fires this season. This figure excludes training, administration, maintenance and community engagement.

During the 2019-20 season the Brigade fielded back to back day and night crews, 24 hours a day for eight weeks, exceeding our previous record in the 2001-02 fire season of four weeks.

The impact of this extraordinarily intense period of deployment was to significantly impact the livelihoods of Brigade members.

Fortunately for the Brigade, many of our senior officers and members are self-employed meaning they have greater flexibility around organising work. However, these members sacrificed tens of thousands of dollars in foregone wages to lead and make up crews and to serve their community.

The protracted nature of the fire season, lasting almost six months exerted massive pressure on our firefighters and their families.

If future fire seasons are to replicate or exceed the intensity, length and ferocity of 2019-20, and according to all scientific reports, this is likely, it will not be sustainable for our firefighters to continue to make such massive personal financial sacrifices every year.

**Recommendation – that the RFS carefully consider how it will increase its workforce capacity to meet the growing needs of future fire seasons and support existing volunteer firefighters better into the future.**

## **EROSION OF FIRE GROUND COMMAND AND DECISION-MAKING STRUCTURE**

We have seen an erosion of the fireground structure over the last few years, where State Operations have made knee jerk decisions based on their data and not the eyes on the fireground.

Field Officers are empowered under the Bushfire Act 1995 to make dynamic decisions on the fireground to maximise the safety without delays. The Incident Management Team (IMT) oversees the allocation and deployment of resources and oversees strategies to achieve the objectives of the incident. The success of the two-way communication between the fireground and IMT is the mutual understanding and local knowledge of what can be safely achieved and what can't.

The responsibility for safety on the fireground should always start with the field officers on the ground, with advice from the IMT who have access to external sources of intelligence. If you take this safety responsibility away from the IMT fireground team, you can put people at risk.

A prime example of this problem occurred on a narrow fire trail from Ingar to Bedford Creek in the Blue Mountains. This fire trail was the last line of defence for the townships from Wentworth Falls to Woodford. This very strategic backburn was undertaken in very volatile conditions with very low fuel moisture content. Our lighting patterns were appropriate and successful for the rugged terrain. We were able to clear around trees that could catch fire to lower the risk of tree fall near the track. The back burn was impossible to put out but needed to be managed to achieve our mission. We received a weather warning of an impending storm cell from State Operations, and took appropriate steps to withdraw if necessary. We then received the order for the complete sector to leave the fire ground from State Operations.

This meant leaving the active back burn unattended and withdrawing to Wentworth Falls township. The Sector Leader pleaded with the Divisional Commander who had pleaded with Operations who had pleaded with the Incident Controller to be allowed to monitor and maintain a presence on the fire ground. There were many phone calls to explain the safety risks of leaving the fire ground, but it was to no avail, and we were ordered off. We were all in total despair knowing the risk this decision had to the townships.

Over an hour passed before we received permission to go back to the fire ground. The sector leader led the crews back to the fire ground and found three spot overs and numerous trees alight along the fire trail. This meant chasing the fire down steep, rugged terrain while also watching for tree falls. The risk of this task was significantly more than being left on the fire ground in the first place. The storm cell was on the next ridge south and only increased the importance of our back burn having good depth.

It was only due to the strategic importance of this control line being held did the crews run this these spot overs down, despite the increased risks. Everyone was angry and frustrated that our safety was compromised from State Operations instructions instead of the IMT and crews on the ground. There was a great sigh of relief that we were able to regain control of this aspect of the fire as it did stop the fire front from progressing north and impacting Blue Mountains towns.

An IMT is attuned to the pros and cons of the strategies in place to deal with issues at hand. With adequate communications, tactics can change rapidly with sitreps up the line. The trust between fireground and IMT is paramount to deal with the dynamics of a bushfire.

Decisions on the fire ground are a team effort between crews, sector leaders and Divisional Commands and Operations. The intimate knowledge of the fireground and its current behaviour is necessary to optimise the safety of the crews. Interference from an external party with only limited knowledge of the situation on the fireground is **dangerous** and can put volunteer firefighters on the ground at great risk.

**Recommendation – that the RFS State Operations only offer assistance or relevant data to the IMT for processing. If State Operations has no confidence in the IMT they should be replaced.**

## **RESPONSIBILITY FOR FIRES ENTERING OTHER FIRE DISTRICTS**

As large fires expanded and crossed into other fire districts it appeared to stretch the resources of the IMT that had been working on the fire. Crews from the Blue Mountains were frustrated by the lack of cooperation and reluctance to hand over control of the fire to our own district where we had the advantage of local knowledge.

This occurred with the fires coming from the north (Gospers Mountain), from the south and from the west (Erskine Creek and Green Wattle Creek). Valuable time was lost waiting for permission to work on the fire in our area, and in waiting for instructions from other



districts to give the go ahead. The Blue Mountains IMT was unable to pass any information down to us as they weren't even kept up to date.

An example of the consequences of this break down in communications can be seen in the following event. A Blue Mountains strike team was sent to Wollondilly district for the Green Wattle Creek Fire. They were sent to Warragamba via the Oaks across the Dam Wall to the W5 Erskine Range Trail to the western side of Dallawang Ridge, a trip of over 3 hours.

Another Blue Mountains Strike team was sent directly to Dallawang Fire trail from Tablelands Road and waited for 5 hours to be briefed by the Wollodilly Group Officer. The start of the backburn was delayed, then rushed and did not achieve sufficient depth to stop the fire front that night. A new fall-back line then needed to be found.

Wollondilly district was stretched as was everyone in the state at the time. But if the neighbouring district is going to be impacted by a fire, that hand over should take place in a timeframe that is strategically sound to enable that district to adequately manage the fire.

Currently, the responsibility for fires is being handed over adjacent, impacted districts too late, when the fire has already crossed district boundaries. In the 2019-20 season, this left the Blue Mountains district with very limited options to respond to those fires once they had entered our district.

**Recommendation – that the RFS ensure that better coordination and communication occur between adjoining districts when it is clear that the fire will impact an adjoining district. When fire approaches Mt Wilson, Mt Irvine, Mt Tomah, Bell, Mt Victoria, Megalong Valley, the Blue Mountains district should have a say on tactics and be kept up to date on the fire progress. Any fire that crosses to the north of the Warragamba back waters should be a cooperative response to get the job done safely and efficiently.**

## **FOOD FOR FIREFIGHTERS ON THE FIREGROUND**

We acknowledge the logistics of feeding firefighters on a dynamic fireground is very difficult. Most of the food was of a generally good standard during these fires. But at times there were also some very poor meals. On several occasions firefighters received sandwiches which consisted of plain vegemite or a single slice of cheese between two slices of dry bread which just could not be swallowed with a dry mouth. This calibre of food did also not meet the energy needs of firefighters undertaking hard, hot and physical work up to 16 hours a shift. Some meals had to be recalled from the fireground due to a mix up in eskies.

The eski system of delivering meals, failed on a few occasions as the small amount of ice included was not sufficient to keep meals cool in the heat of the day on the back of a tanker. On more than one occasion sandwiches weren't eaten due to being suspected of being spoiled.

If meals are to be delivered to firefighters on the fireground they need to be taken to where firefighters are currently operating. The delivery vehicles need to be capable of reaching

crews on the fireground no matter what the terrain is. It's definitely not acceptable to have food left at a gate one hour from the fireground. In some instances meals allocated for lunch were not received until 6pm at night.

Food induced sickness on the fireground is a major safety concern for firefighters given the remote areas we work in.

**Recommendation – that the RFS ensure food for firefighters on the fire ground meet a minimum nutrition standard for strenuous work.**

**Recommendation – that RFS vehicles be fitted with small fridges to ensure food doesn't get hot and go off.**

**Recommendation – that food be taken to the crew's actual location on the fireground, and that those vehicles be equipped with tools to assist with navigation.**

## **FIREGROUND COMMUNICATIONS**

The Blue Mountains has a large number of black spots where there are no radio or phone communication. In the Kedumba Valley, Megalong Valley and on many of the ridges, we had to travel in excess of half an hour to get any reception.

Attempted communications through tablets and phones were used more often this season than ever before. Updated maps and photos were also not getting through either up to the IMT or down to sector leaders. In the absence of further towers being installed to address this lack of coverage more satellite capable equipment needs to be provided to ensure RFS vehicles and crews are able to maintain communications with the RFS network.

**Recommendation – that the RFS examine communication blackspots and investigate where additional towers could be constructed to give better coverage for remote areas.**

**Recommendation – that sector leaders be equipped with satellite phones and the capability to receive and send images by satellite ensuring they are able to maintain communication with the RFS network.**

**This submission is lodged on behalf of Katoomba / Leura Rural Fire Service by Brigade Captain Peter Bennett**

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