Dear Commissioners

The Protected Area Workers Association of NSW (PAWA) is a professional organisation for people employed in conservation land management. Our members include on ground managers such as Field Officers and Rangers as well as support personnel such as Fire Management Officers and Scientific Project Officers who directly support workers in the field. Our members have considerable experience in all aspects of natural resource management and in particular in fire management, both planning and conducting hazard reduction burns and combating wildfire.

Many of our members work for the NSW National Parks and Wildlife Service and during the recent bushfire emergency were involved in fire fighting alongside our Victorian colleagues from the days immediately following Saturday 7 Feb 2009 until the fires were officially declared contained.

PAWA understands the enormity and tragedy of the recent fires and we extend our heartfelt sympathies to all those affected. The comments below are given in the hope that changes will be made which will reduce the impact on people and the environment in any future moderate to extreme fire events.

As a group of professional land managers we feel we have valuable insights gained over decades of experience to bring to your Inquiry. While these are largely based on our New South Wales experience, we feel we have direct and relevant information to the Victorian situation.

1. HAZARD REDUCTION BURNING AND EFFECTS OF CLIMATE CHANGE

PAWA realises the recent fires are an emotional and politically sensitive matter, particularly for those who have lost their loved ones or worldly possessions in the fires. However we believe the benefits and realties of hazard reduction burning needs to be discussed in a rational manner in order for society to come to a reasoned understanding about the use and value of hazard reduction burning.

1.1 Similar events are inevitable in the future

It is apparent to PAWA that further large scale fire events are inevitable, regardless of the actions taken by land management authorities and private landholders. Hazard reduction burns will not reduce enough ground and mid level fuels to prevent intense fires on extreme fire weather days. That is not to say hazard reduction burning does not have an important role to play in managing fire in the Australian landscape, rather it recognises the simple fact

that the forces of nature periodically align to produce a situation that humans cannot control.

Since European settlement, large fire events (resulting in over 100,000 ha being burnt or significant loss of life) have occurred in both the western districts and eastern parts of Victoria in 1851, 1898, 1914, 1926, 1932, 1939, 1943/44, 1952, 1962, 1965, 1969, 1977, 1980, 1983, 1985, 2002, 2003 and now 2009. [1]

These fire events have occurred despite the increasing level of equipment and trained personnel available to combat them in recent decades and despite claims that forests were better managed for fires "when there were more people making a living in the bush".

As happened on 7 February 2009, weather conditions simply overwhelmed the human response to these previous high intensity fires. This should not be considered as unusual or preventable. We do not expect to control the ferocious winds of cyclones, nor stop rainfall during flood events. There is no reason why we should believe we are able to control intense fire behaviour on extreme fire danger days.

That is not to say that we can do nothing about extreme fire behaviour but arguing "no fuel - no fire" is simplistic and unachievable. In Darwin a strict building code was introduced after Cyclone Tracey to build cyclone resistant houses and we generally do not allow homes to be built on flood prone land. Why then should we allow unsuitable houses to be built in fire exposed areas?

When we add the impact of global warming to this fire history, it is obvious that further large, intense, fire events are going to occur in the future. The CSIRO[2] predicts that by 2030 temperatures will rise by an average of 1^{o} C, there will be changes in temperature extremes with fewer frosts and substantially more days over 35^{o} C. Rainfall will decrease over southern and eastern Australia, particularly in winter and spring. The CSIRO further predicts that droughts will become more frequent, evaporation rates are likely to increase and consequently, high fire danger weather is likely to increase in the south east of Australia.

The obvious conclusion to draw from this evidence is that fire events will increase and that uncontrollable fires will become more common in the near future and remain with us into the long term. While hazard reduction burning will have a role to play in reducing the impact of these increasingly frequent fires, PAWA believes it is inevitable that major fire events will continue to occur and that our society needs to prepare for them and plan and implement smarter decisions about where and how people live in a fire prone environment landscape.

1.2 Role of hazard reduction burning

PAWA recognises that fire is an integral part of the Australian landscape and its appropriate introduction into and management throughout the landscape will not only assist in protecting lives and assets, but will also have benefits for our native flora and fauna.

However, whilst hazard reduction burning can have benefits for the protection of life and property it is not a panacea for protecting people and property during bushfires. Judging from some media comment, it would appear that many people assume that a wildfire will conveniently occur in, or burn into an area that was hazard reduced within the last 2 years and miraculously go out. This is a patently unrealistic expectation.

Indeed PAWA members have been involved in fighting intense wildfires where previous burning has had no impact on fire behaviour. In such instances, wildfires have either raced through large areas which were burnt in high intensity fires three or four years previously, or spotting distances have been so large (up to 10 km), that the fire has simply leap frogged over large areas of land burnt only the previous year. At such times, the weather simply overwhelms the effectiveness of fuel management programs. PAWA believes that community members need to be educated in the limitations of hazard reduction in protecting them during bushfire events. Recent work by Ross Bradstock from the University of Wollongong examines the relative effect of hazard reduction burning on the reduction of risk. [3]

Based on the above practical experience and the sure knowledge that we cannot predict where a wildfire will start, PAWA believes that hazard reduction programs need to concentrate in the first instance on areas where they can be of most benefit i.e. close to community assets such as towns and in areas which offer strategic advantages during wildfires.

As professional workers in the field of conservation PAWA strongly believes that ecological considerations must not be completely subjugated to the desire for human and infrastructure protection.

While the Australian environment does recover after bushfire, it is a complex system which does not respond uniformly to fire. Society runs the risk of losing significant conservation assets (rare species and habitats) if hazard reduction burning is not done in a considered and sophisticated way.

Applying a simple “no fuel – no burn” policy to broad areas of the landscape will have a detrimental impact on the protection of our native flora and fauna.

Hazard reduction burning programs need to introduce variety into the landscape by creating a mosaic of burning in size, fire intensity and frequency. Some ecosystems will require low intensity burns, while others will

require high intensity burns to not only reduce fuels, but to also stimulate regeneration of the vegetation.

While fire events such as February 7 do occur, PAWA believes society needs to recognise that the vast majority of bushfires are of a much lower intensity and are amenable to control (though sometimes with difficulty). Hazard reduction burning does have a significant role to play in reducing fire intensity and assisting in fire control during low, moderate and high fire danger days. Therefore PAWA believes that all land managers (including private owners) should undertake hazard reduction burning on the bushfire prone lands they manage particularly in the immediate vicinity of assets.

1.3 Practical constraints on conducting hazard reduction burns

As practicing professional land managers, PAWA members know only too well, the constraints and limitations that hinder the successful completion of hazard reduction burning programs. These constraints are real and have to be dealt with by land managers when planning and conducting hazard reduction burns. They complicate the planning and execution of hazard reduction burns and can severely impact on the area burnt in any one year. Some of the main complications are highlighted below.

1.3.1 Short period of suitable weather.

There is a fine line between conducting a successful hazard reduction burn and inadvertently lighting a wildfire. Conducting a successful hazard reduction burn is a mix of science and art. Suitable weather conditions for a successful hazard reduction burn generally only occur for one or two months of the year. Also, in many areas, the hazard reduction burning season may be cut short by a single rainfall event which coincides with cooling weather, making it impossible to burn successfully.

Weather forecasts, while generally reliable, are not always accurate and a slight increase in temperature or drop in humidity can lead to the postponing of hazard reduction burns. When the period to conduct hazard reduction burns is so short, postponing burns because of unsuitable weather conditions can have a significant impact on the number of hectares burnt.

PAWA recognises that global warming may also affect the amount of burning that can be done. The effect of global warming on hazard reduction burning is still to be confirmed. In the worst case scenario, the period suitable for burning may be shortened because of drier fuels and warmer temperatures. On the other hand, global warming may well allow burning in traditionally wetter and cooler times of the year because of changing rainfall patterns.

1.3.2 Location of assets.

As long standing professionals, PAWA members have observed with alarm the increasing expansion of houses and other infrastructure into bushfire prone landscapes, often right up to the boundaries of national parks, nature reserves and other areas of bushland.

Often these developments are poorly designed and located in steep terrain with insufficient fire radiation zones, and fire fighting vehicle access. The presence of essential services such as powerlines also complicates the conduct of burns because of the need to prevent poles from being burnt and falling timber from bringing down powerlines. This can severely complicate the conduct of hazard reduction burns, right in the area where they are most needed – up against human settlements and assets. Conducting hazard reduction burns up against assets requires the use and coordination of many more fire fighting resources per hectare than burns in more remote areas.

Other new constraints keep appearing, further compromising successful hazard reduction programs. Hazard reduction programs now must take into account air pollution impacts on asthmatics and the elderly as well as protecting special assets where vulnerable people live such as hospitals and nursing homes. PAWA members planning and implementing hazard reduction programs are now being confronted with requests to protect the income of the vigneron industry to delay hazard reduction burns until the grape harvests have been completed. Indeed, in March 2009, the NSW Wine Industry Association wrote to the NSW Bushfire Commissioner seeking a formal delay in hazard reduction burns until after harvest in areas where grapes are grown. PAWA recognises that smoke taint of wines as a result of smoke settling on vines imposes economic hardship on vignerons. However in some areas of NSW such as the Central West and Mudgee areas, harvesting coincides with some of the more favourable weather conditions for burning. Delaying burns till after harvest is completed can significantly compromise the successful completion of already crowded burning programs because of the delays at the start of the program.

1.3.3 Lack of resources to conduct hazard reduction burns.
As explained above, the period available for conducting hazard reduction burns is quite short in some areas and can be shortened even more in years of either drought or higher rainfall. Therefore it is important to make the most of advantageous weather by being in a position to conduct as many burns as possible when conditions are right.

In these times of smaller government, conservation and forestry agencies around the country suffer from a lack of personnel and resources to conduct current hazard reduction burning programs, let alone expanded programs. Whilst use of volunteer fire fighters supplements the agency personnel, there are real constraints on the availability of volunteers mid week when they cannot get time off work to attend hazard reduction burns. It is therefore generally impossible for agencies at the local level to coordinate more than one or two burns at the same time.

Using volunteers to assist in hazard reduction burns improves fire fighting experience and interagency cooperation. However in NSW, the Rural fire Service has their own responsibilities for conducting hazard reduction

programs on private property and other areas of crown land. It is therefore unrealistic to rely on volunteers in order to complete burning programs on government managed land.

If an expanded hazard reduction program is to be implemented in future, then state governments must be prepared to finance the temporary employment of seasonal fire fighting staff for conservation and forestry agencies during the summer bushfire and autumn hazard reduction periods. This will allow multiple burns to be conducted concurrently by agencies and will allow for a higher number of burns to be completed each year.

1.3.4 The politics of blame

PAWA was very concerned by some of the media comment in the immediate aftermath of Saturday 7 February, blaming professional government land management agencies for causing the fires, apparently based on the lack of hazard reduction burning carried out in recent years. These comments appear to be motivated by political, anti conservation agendas and were not aimed at providing insightful and helpful contributions to the debate. In at least one occurrence, the commentator mentioned a wildfire incident involving a PAWA member and the commentator's representation of the event was, in the context of the article, highly distorted to say the least.

These uninformed and slanderous allegations against professional conservation managers are not only offensive to PAWA members and our colleagues in Victoria and around Australia, but they completely ignore the practicalities of conducting successful hazard reduction burns, simply for the sake of making political capital.

We strongly urge the Royal Commission to see through the emotive political arguments which will undoubtedly be put before the Commission. It is imperative that the exploration and discussion of issues surrounding hazard reduction is conducted in a rational, rather than emotional or politically motivated manner.

2. URBAN PLANNING

As mentioned earlier in this submission, major fire events have occurred in Victoria on at least 18 occasions. It is time that we learn how to live in an environment with such an ongoing and predictable event. Lessons learned from the destruction of Darwin from Cyclone Tracy resulted in a drastic change in building codes to ensure new buildings were made more cyclone resistant. In light of the lessons learned from these and previous intense fire events, we must adapt the way we live in bushfire prone areas to ensure we live in a way that gives us the best chance of surviving medium and high intensity fires.

Much of the information required to live safely in a fire prone landscape is already known and just needs implementing.

2.1 Adequate fire radiation zones around buildings and town boundaries to reduce the amount of heat impacting on dwellings.
In 2001 NSW brought in new requirements for fire protection zones around new developments based on the slope of the land and vegetation type. This code also placed requirements on landholders and developers to provide for their own protection within the bounds of their property and not place the responsibility for fire protection on adjoining crown land managers and neighbours.

While such codes apply to new developments, in NSW we are burdened with a vast legacy of inappropriate land use decisions that places people and buildings within the bush with inadequately designed buildings, with inadequate fuel control possibilities within their own property and with little or no access for fire fighting vehicles between the bushland and the buildings. As a result, land management agencies are left with the responsibility of undertaking bushfire protection to these developments on state land because they can't be implemented on the adjoining developments. This places further burdens on already extremely limited resources available to government agencies.

PAWA understands the Victorian government has pushed through changes to development planning in the immediate aftermath of the 2009 fires. We are not familiar with the content of these new planning regulations, however we feel strongly that they should include similar provisions to the NSW planning rules for new developments in bushfire prone areas.

2.2 Compulsory acquisition of some properties.
There is a long standing practice in some local government areas in NSW to purchase houses and properties in flood prone lands. As council buys the properties, the buildings are demolished and the land is retained in public ownership. This is done in order to move people from areas which cannot be protected from flood waters and which complicate flood relief programs because emergency services personnel have to spend time and resources in either rescuing people or ensuring they have adequate food supplies. It just makes sense not to have people living in areas that will flood.

The same logic should be applied to bushfire prone lands. This would result in state governments undertaking compulsory acquisition of properties which are in completely inappropriate and undefendable locations. Some people are living in locations that are extremely fire-prone and which will suffer repeated destruction from bushfires. Often, these very same properties severely hinder or complicate the implementation of hazard reduction burning. For the greater benefit of society, these people should be assisted to relocate to safer locations.

2.3 Revised building codes.

PAWA understands from media reports that the Victorian government has introduced new building design standards for buildings in bushfire prone areas.[4] PAWA is not familiar with the detail of the codes, however we applaud this action to increase the resistance of buildings to bushfires. PAWA is also aware of some media reports expressing concern about the adequacy of the standard, expressing the fear the 1,000^{o} Kelvin heat rating for exterior materials is insufficient and that that a heat resistance rating of 1,600^{o} Kelvin is more appropriate.[5]

PAWA is extremely concerned that the new building code provides adequate protection to property owners. It is our Victorian colleagues and volunteer fire fighters that will be called upon to help protect these buildings. It is essential that new buildings be designed and constructed in a manner which gives the property owners and fire fighters a realistic opportunity to protect them. They will also act as a safe refuge for people who decide to stay and defend their properties.

2.4 Refuge bunkers for individual properties and towns.

PAWA believes that all buildings should be designed and constructed to provide adequate protection for its occupants. We have noted however, the public discussion about the use of bunkers and we believe they may have a valuable role to play in protecting people during bushfire events.

3. STAY AND DEFEND OR LEAVE EARLY POLICY

PAWA firmly believes the stay and defend or leave early policy should be retained. PAWA believes this policy holds the greatest potential for saving lives and property. It should be remembered that the extreme wildfire conditions such as occurred on February 7 are the exception rather than the rule. Most fires are nowhere near as intense as that fire. Even during most medium to large fire events it will not be possible for fire fighting crews to defend all houses and other property. During wildfire conditions such as those of February 7, it will certainly be impossible for fire fighting units to assist in protecting all people's houses. Therefore, more property will be saved if adequately prepared owners stay and defend their assets.

Compulsory evacuation will be hard to enforce in a timely manner during most fire events. Human nature will become resistant to compulsory evacuation once a few evacuations take place, but no fire event occurs.

Compulsory evacuation will most surely result in a greater loss of people's homes and property from even medium intensity events as there will be nobody there to defend them.

As was tragically found during these fires, the decision to leave was left too late by many people resulting in their deaths in their cars. The message

about leaving early (many hours) in advance of a fire needs to be learned by the community. In most fire events there will not be sufficient time to allow safe evacuation. Cars on the road during bushfire events not only increases the risk to community members, but increases the risk of accidents involving fire fighting vehicles and traffic congestion slowing down fire fighter response times. It is therefore essential that people are adequately prepared and have defendable buildings in which they can survive the passing of the fire front.

PAWA suggests a Fire Danger Index (FDI) trigger could be developed, above which the community are advised that there may be a significant risk to people opting to stay and defend their properties. This would then allow people to make rational and early judgements about whether they will leave or stay and defend.

PAWA is concerned that some sectors of society believe that the emergency services should capable of providing protection to all citizens in all cases. This is a patently unrealistic expectation.

PAWA strongly believes that citizens should be given the clear message that they are expected to be self reliant during bushfires and that they should not expect assistance from fire fighters to save their houses and property. If this is clearly understood by citizens, then they will make much clearer decisions about preparing their homes properly or deciding to leave early.

In order to make clear sighted decisions about property and personal protection, people require good information on which to base their decisions. Whilst fire services have been urging and showing people how to prepare for bushfire events for a number of years, it is apparent that many people have not heeded this message. Plastic hoses, electric water pumps, pvc pipes and protective clothing comprised of shorts and t shirts will not provide protection for property or people in the event of fire.

An improved public education campaign is required which results in effective bush fire protection behaviour by the Australian public. Such a campaign should include the use of suitable materials for defending property. These public education campaigns should be commenced quickly to take advantage of the currently heightened public awareness of these issues. Implementing these programs will require an increase in budgetary resources from government.

4. CONDUCT OF THE FEBRUARY 2009 FIRE FIGHTING OPERATIONS

PAWA is not in a position to comment on how the fire suppression operations were conducted, as we are not privy to all of the events that unfolded in February. However a number of our members assisted our Victorian colleagues during the recent fires and we trust the following observations from PAWA members will assist the Commission in its deliberations.

These observations are in no particular order of importance, nor are they meant as criticism of the way the fires were managed. PAWA members have been involved in large scale and long running fire events in NSW, South Australia and the USA as well as previous fire events in Victoria and we fully appreciate the difficulties faced by fire fighters both in the field and the control centres during the recent fires.

4.1 Use of helicopters in fire suppression and mop up operations.
PAWA would like to support the continued use of light and medium helicopters to assist in bush fire suppression in Victoria. Water bucketing helicopters used in close support of ground crews are an invaluable tool to help extinguish spotovers and assist in mopping up and blacking out of control lines.

PAWA is aware that helicopters are very expensive tools and are responsible for much of the increase in the cost of fire suppression over the last decade. However when used correctly they offer the on ground fire fighters very important support and advantage, particularly in controlling spotovers. Helicopters are a vital fire fighting resource and should be fully utilised where they can be of assistance. However they will not put out a fire on their own. They are best used in conjunction with crews on the ground. Helicopters are particularly useful in the very early stages of fire development. They can rapidly deploy ground crews to remote areas to extinguish fires when they are very small and their water bucketing has greater effect on lower intensity fires. For this reason, PAWA believes that helicopters should be stationed at various locations around the state during summer to improve response times to fire ignitions. PAWA members have seen fires in NSW escalate in size and intensity because of the frustratingly long response times from capital city based helicopters.

4.2 Update fire fighting equipment.
It was noted by PAWA members at the fires that the Department of Sustainability and Environment (DSE) employees were using a range of fire fighting pump setups. Many of them appeared to be quite old, with individual pipe and connection configurations. Very few of them had cupboards for the protection of the personnel's fire fighting pack and gear. Whilst they still perform, they do not necessarily make the task of fire fighting easier.

The NSW National Parks and Wildlife Service (NPWS) has developed a standard Category 9 fire fighting unit which quickly and easily loads onto the back of Toyota landcruisers. These units have standard electric start diesel pumps, standard hose and fitting arrangements and cupboards to store personal and fire fighting equipment such as chainsaws, rakehoes, etc. The value of having a standardised setup was evidenced during the bushfires as NPWS crews from all over NSW were able to easily use any of the NSW NPWS fire units stationed in Victoria for the duration. Crews from Sydney

were able to seamlessly use fire fighting vehicles from Broken Hill because they were familiar with the layout and operation of the units.

PAWA believes that additional capital resources should be made available to DSE to fully update their fire fighting fleet to a standard unit. This funding should be sustained to ensure that replacement of old and wearing fire fighting vehicles can be replaced in a timely manner to prevent the aging and deterioration of the fleet. PAWA members know from experience that there is a wide variety of opinions as to what is the best configuration for fire fighting units. In order to reduce the time spent in designing a system from scratch, we suggest that DSE look at existing design options used in other states as a starting point for their considerations.

4.3 Use of handheld infrared cameras.
PAWA members were very impressed with the capabilities of ground based infrared cameras which were used to identify hotspots during mop up operations. Whilst our members are familiar with the use of helicopter mounted Forward Looking Infra Red (FLIR) cameras, being able to use similar devices on the ground meant that hotspots cold be marked by coloured paint for ground crews locate and mop up. Helicopter based systems, while good and useful, only provide ground crews with coordinates which require the use of GPS's to get the crews in the vicinity of the hotspot, which must then be searched for by the ground crews.

4.4 Campground logistics were extremely well organised.
PAWA members stationed at large staging areas such as Alexandra are full of praise for the way the staging areas were set up and run. Adequate sleep and good food are required by all fire fighters, especially on long campaign fires. Using professional caterers providing food 24 hours a day was a master stroke. The quality and variety of food they provided was terrific and went a long way to maintaining high morale amongst fire fighters. The provisions made to ensure night crews could sleep during the day were also outstanding. Placing sleeping tents within an air conditioned marquee made life much more bearable for those night shift fire fighters. The logistics personnel and contractors should be congratulated for the systems they put in place and for the friendly manner in which they treated interstate crews. They were also under considerable strain and their efforts did not go unnoticed by those of us who benefited from their hard work.

We have much to learn in NSW from our Victorian colleagues when it comes to setting up large base camps.

4.5 Incident management teams.
As is done in the USA, we need to form and train Incident Management Teams who work together as a unit at incidents and which can be brought in to provide relief to local incident managers. These teams would include the Incident Controller, Planning Officer, Operations Officer and Logistics Officer positions.

Working together as a team instils confidence, familiarity and establishes teamwork which is invaluable at the top of the management structure when incidents are fluid and fast moving. Because these team members are experienced, they are able to operate efficiently and coordinate local resources. It is envisaged that these teams would work with local staff and volunteers who know the particular details of the area of the incident and who can provide the local knowledge on which planning and operational decisions are made.

These teams should be formed in all states and be considered Australia wide resources, available to assist and relieve local incident managers during large scale or extended incidents. As stated earlier in this submission, PAWA believes global warming will increase the frequency of fire events. Well trained and coordinated control centres are going to become an increasingly important resource in our efforts to fight wildfires.

5. TRAINING OF FIRE FIGHTING PERSONNEL

PAWA believes that adequate training is required for all fire fighting personnel whether they are a volunteer or a paid professional. Fire fighting is an inherently risky business and those who undertake it should received the best training possible to assist them in making sound decisions on the fire ground as well as ensuring their safety.

Training should cover all aspects of fire fighting, from basic safety awareness such as assessing fire behaviour and watching out for dangerous trees and limbs, to working in and around helicopters.

6. EXTRA BUSHFIRE RESEARCH REQUIRED

PAWA's members have for many years been concerned at the lack of funding for bushfire research Australia wide. It beggars belief that in such a fire prone country, all governments have so poorly funded such an important field of research which as we have seen regularly exacts a terrible toll in human life and property. While we recognise and applaud the work of the Bushfire Cooperative Research Council which has been established in recent years, we believe this sort of research effort should have been happening for decades.

State and federal governments must significantly increase the amount of funding available for bushfire research. This research should be largely aimed at providing land managers and fire fighting organisations with the tools and decision making capacity to better control wildfires and implement hazard reduction burns.

Research is required into, but not limited to, the following areas;

- Remote (satellite) daily fuel assessment (quantity and fuel moisture)
- Urgently need to acquire real time fire mapping as tool for fire fighters. Satellite or aircraft based. A super Sentinal system – more accurate and constant
- We urgently need to update fire prediction tools – Macarthur Meters need to be updated with Project Vesta work
- The use of new technologies in fire management (eg aerial drones or helicopters with cameras that could give Incident Management Teams live pictures of the fire and live video links so that crews could be briefed at staging areas closer to the fires by Incident Management staff)
- Fire behaviour modelling in all Australian ecosystems
- Effect on fauna of different fire intensities and sizes
- Aboriginal use of fire in different parts of the country (methods of burnings, where and when of burning). Extrapolating the burning practices of Arnhem Land to all other parts of the country has no value. We need to gather specific fire management knowledge for the various biogeographic regions of Australia.
- Natural signals recognised by Aboriginal people which indicate the type of upcoming fire season
- Effects of global warming on bushfire behaviour
- Building codes and materials

7. LEGAL PROTECTION FOR FIRE FIGHTERS AND PLANNERS

PAWA is very concerned that paid and volunteer fire fighters are protected from the threat of legal action arising out of decisions made during both wildfire events and the implementation of hazard reduction programs.

We live in an increasingly litigious society and PAWA is concerned that paid and volunteer fire fighters should be able to conduct their business without the fear of legal repercussion either on their agency or personally.

Wildfires are often quick moving and fluid events where some strategies work and some don't. PAWA believes that nobody involved in wildfire decision making and implementation should face the prospect of being sued because of the way a wildfire suppression operation is conducted.

As discussed earlier, PAWA believes the practicalities of conducting some hazard reduction burns are becoming more complex because of the need for asset protection and the reduced window of opportunity to conduct burns safely because of global warming.

For these reasons, PAWA believes that land managers should not face the threat of being sued because of a failure to complete a full program of hazard reduction burns.

8. PERSONAL TOLL ON PROFESSIONALS WORKING AT FIRES

PAWA would like to bring to the attention of the Royal Commission some of the personal costs experienced by professional fire fighters employed by conservation and forestry agencies around the country during large campaign fires. Whilst the media concentrates on the sterling efforts of volunteers, employees of conservation and forestry agencies are often the subject of attack in the media during and after large fire events.

It should be remembered that conservation and forestry agency staff live and work in the rural communities which are affected by bushfires. They are members of the community, their children go to local schools and they are affected every bit as much as other community members during large bushfire events. The recent bushfires have been no different.

An email received by PAWA from Chief Executive Officer for Parks Victoria Mark Stone during the recent bushfires graphically relates the impacts on the Parks Victoria staff who live in Kinglake. Mark Stone's comments are included below

> *"We have been blessed in that no staff have been injured. Unfortunately, many have lost relatives including their mums, dads and sisters. Several former staff members have perished and many close colleagues from our park communities have also lost their lives. Six staff have lost their homes and all staff at Kinglake lost their cars when our office and depot was destroyed.*
>
> *Many Parks Victoria staff have discovered bodies in the hardest hit areas, including the discovery of nine bodies on a walking track. I have been out in the Kinglake area and the actual impact on the ground is unfortunately even more graphic than the news footage."*

For those employees who manage areas subjected to large fires, their involvement with the fire doesn't end when the last smouldering log has been extinguished. These staff face the ongoing task of repairing damaged park infrastructure, rehabilitating fire trails and emergency control lines constructed during the fires, battling the invasion of weeds entering into disturbed areas, clearing fire weakened trees which fall onto fire trails and getting parks in a condition to allow the public to visit once again. This work can take a number of years to complete.

Long running campaign fires involving continuous long shifts can place strains on family life with the employee away for extended periods and with the constant worry for partners and children about the safety of their loved ones who are fighting the fires.

While most employees of conservation agencies have a calling and a love of their job, long campaign fires can have a dramatic impact on their lives, which can last a number of years. Whilst we understand from our Victorian colleagues that fire agencies are getting better at managing fatigue and staff wellbeing, more work and capacity building needs to be done by these agencies and extra support should be given to the agencies by the state government to improve staff welfare issues for professional bush fire fighters.

CONCLUSION

We trust you will find the information contained in this submission useful in your deliberations. If further investigation of the matters raised in this submission is required, PAWA is prepared to make representatives available to the Commission to answer any questions you may have.

David Burns
Chairperson
Protected Area Workers Association of NSW

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