

May 22nd 2020

The Bushfire Alliance
c/- John Travers



NSW Bushfire Inquiry Commissioners
Professor Mary O'Kane AC
Mr Dave Owens APM,

Dear Madam / Sir,

Re: Expert Submission into NSW bushfire inquiry – May 22, 2020

On behalf of The Bushfire Alliance I provide this amended submission in respect of the tragic circumstances that surrounded the 2019/20 NSW bushfires.

The Bushfire Alliance is composed of three highly experienced bushfire experts who, over the span of 40-50 years have practiced widely in the fields of bushfire control, mitigation and management. We can canvased our thoughts widely in the preparation of this submission. Our CV's are attached.

This amended submission follows on from our initial submission dated 17 April 2020 and we thank you for the opportunity to amend.

We aim to create an effective and sustained, bushfire management structure for NSW and we believe the structure of fire management and fire suppression is about land management and we will show that this has been undermined in NSW by the rising strength of the RFS whilst traditional agencies are floundering and underfunded; and arising from inquires such as this are eager to move away from the assumed responsibility of managing large native vegetation holdings.

Our submission aims to reflect on past success and offer a future based on a better structure along with a commitment to what our community, the environment and our economy requires – protection !

If possible, we would like to meet with the committee and contact may be made in the first instance with the author at [REDACTED] or [REDACTED].

Yours faithfully

A handwritten signature in black ink, appearing to read 'John Travers', with a large loop at the end of the name.

John Travers *Ba Sc/ Ass Dip/ Grad Dip / Bpad L3*

On behalf of *The Bushfire Alliance*

- John Travers
- Don Nott
- Graham Swain

NSW bushfire inquiry submission



*A review of the past, the present and
recommendations for the future
..... and the need for a broader
land management response in NSW*

Executive Summary

The bushfires of 2019 / 2020 caused untold emotional turmoil to a huge number of NSW residents. That emotional turmoil was based on either the shock of what happened to them and their families and or the economic impact upon their livelihoods but most of all the sheer removal of the life they once knew. Notwithstanding the ecological and environmental impact upon our unique landscape.

Only by reviewing the past can the current dilemma be properly understood

As a reminder of just one story - five months after the fires hit the small community called Bobin, north of Wingham a hinterland town on the mid north coast of NSW I met Kim who lost everything that was possible to lose.

Luckily, Kim lived beside a river. Remarkably the only forest that affected Kim, before the fires, was a narrow riparian portion across the road. The rest was grazed pasture. Luckily, her husband, a local firefighter who was fighting fires down the road (while their own home burnt), had told Kim that should the house be threatened and it was too late to leave, to jump into the river to save herself – and that's what happened.

Like many others Kim was underinsured and awaits the future – whatever it will be.

As we know airborne burning embers show no mercy and if a property and the dwelling are sufficiently ill-prepared then the worst may well occur – as it did for Kim and many others.

This is the scene which is this replicated by many thousands of people across the state of ours and we have come across many individuals and communities who simply can't understand why it happened over such a long period of time (June to January) with the apparent failure of the fire services to quell the onward march of these fires and their fury.

Things need to change.

The RFS are now a bureaucratic and cumbersome set of silos' and their capability to manage bushfire hazards (and bushfire operations) has been shown to be insufficient to service the needs of NSW.

We believe that has hazard reduction in NSW should be overseen by an organisation aside from the RFS with the sole authority to protect the NSW community from the impacts of bushfires through the undertaking of effective hazard reduction where and as required.

We believe the structure for this organisation is similar to the previous Coordinating Committee of the Bushfire Council and should be able to be financially capable and physically powerful to ensure the desired hazard reduction can be undertaken effectively in each and every year regardless of the weather conditions.

This means seven days a week with sufficient resources to enable all desired plans to be implemented - not delayed by days or weeks – but still implemented through various techniques – not just ignored till next year.

We believe the new structure should mimic the federal government's approach to defence in this country e.g. the Australian Defence Force (ADF) through the Army, Navy and Airforce seeks to protect Australia 'at all costs'.

Our belief is we do not need another firefighting agency.

Rather, we seek a dedicated hazard reduction agency with a dedicated force of permanent paid professional fire managers, bolstered by volunteers, working over a seven-day week roster 365 days per year to prepare and implement hazard reduction works and effect the delivery of those hazard reduction works in a timely and efficient manner and in an ecological and environmental responsible manner .

We believe this should be called ***NSW Fuel Management Service***.

We propose that this approach would extract suitable expertise from within the existing agencies (NPWS, RFS, Forests NSW) and to develop that expertise and capability such that they would be operationally effective in a short period of time.

It would be a mistake to put this service under the responsibility of the RFS as they should strive to achieve excellence in bushfire suppression and that will need to undoubtedly engage more with aerial fire fighting methods.

The extent or aspiration of the works should be delivered by the *NSW Fuel Management Service* with a very clear strategic framework of where those works should occur and with clear funding capability to ensure those works are able to be implemented. We believe that funding must be tied to the Treasury such that in times of drought additional funds can be drawn upon.

The specific role of the *NSW Fuel Management Service* would be to;

- Reduce the bushfire hazardous fuels by all available means either through burning, slashing, grazing on unmanaged grasslands and so forth; and to
- Ecological advise and manage the needs of the environment in their works and to that extent would seek ongoing support from the NPWS and Forests NSW other scientific agencies as required.
- Implement hazard reduction within local government boundaries for local government.
- Effect quality fire trail maintenance across the state and ensuring fire trail access where and when required so that fire fighters can do their work safely. It would do so with the co-operation of landowners and the co-ordination of available resources.
- Importantly the *NSW Fuel Management Service* would fund Local Aboriginal Land Council's to undertake burning or other hazard management operations on their own lands. It is widely acknowledged

that most aboriginal land councils do not have funds to manage the large areas they now own but they own significant bushfire hazards.

This agency would not be responsible for Section 63 matters e.g. fire hazard notices. That would remain with the RFS as a domestic matter.

We strongly believe the *NSW Fuel Management Service* should also have an aboriginal representative as a full member; and cultural burning should be tried and tested over an (at least) ten year period in order to properly evaluate the methods used. We do believe there is no historical evidence that cultural burning will effect any solutions for hazard reduction as needed from a broad sense but we believe there is value when used for prescribed burning operations to achieve either ecological aspirations or cultural protection aspirations.

We believe the Australian Defence Force principal should be applied in NSW with the following approach.

Emergency Management NSW as its head and comprised of the subordinate authorities such as;

- RFS
- Fire & Rescue
- Fuel management Service

Each would operate within its own charter but work within the policy and coordination framework of the head authority.

- Land management agencies such as local government would pay for hazard reduction burns funded from insurance levies and other self-garnered funds.
- Aboriginal land councils must also find funds and embrace a professional approach to hazard reduction on their lands such that they participate with the NSW Fuel Management Service.
- NPWS and Forests NSW must be regarded as land management agencies and be adequately funded to participate with the NSW Fuel

Management Service or engage the NSW Fuel Management Service to undertake work on their lands.

We also must ensure that the RFS, as a fire suppression agency, are able to engage suitable aircraft to fight these mega fires.

Hence our view that the role of hazard reduction should be separated from the professional needs of what must be the best fire suppression service in the world.

But if the firstly create the best hazard reduction service possible then the very dangerous role undertaken by the volunteers of the RFS may well be somewhat mitigated by removing hazards where the people live – before the fires arrive.

Our submission aims to reflect on past success and offer a future based on a better structure along with a commitment to what our community, the environment and our economy requires – protection !

NSW bushfire inquiry submission

*A review of the past, the present and
recommendations for the future*

*..... and the need for a broader
land management response in NSW*

What caused these multiple fire events

There were many drivers that led to the events of 2019/20 with the major drivers being atmospheric conditions such as.

- A changing climate
- Extensive drought
- Fuel dryness
- Unusually high wind velocity

With the weather conditions in place the 'landscape resilience' to bushfire impacts was then solely determined by the effectiveness of pre fire season hazard reduction operations and the ability for the suppression effort to act with success.

On a 'site specific' basis, and in hindsight, we can say that there was.

- Insufficient defensible space separating dwellings from hazardous vegetation
- Inadequate property management by homeowners was very evident
- Inadequate dwelling resilience for those structures not constructed to conform with AS3959 '*Construction of buildings in bushfire prone areas*'.

Building in bushfire prone areas is a risk if the homeowners are not prepared for that risk then they are exposed to a potentially fatal path.

Equally, and most importantly, there was also a high level of un-preparedness by the fire suppression agencies in the tactics employed such as the;

- inadequate aerial firefighting strategy, and an,
- overwhelming incapability of ground crews to fight the onslaught of the fires.

Given the very public 'education' on 'mega fires' by our RFS leaders (for some years now) the fire ground crews were left unsupported to do a most dangerous task.

In that regard a number of questions arise.

1. Why was the RFS found so wanting for aerial resources when the drought was known ?
2. Why were the known weather conditions not responded with an adequate response capability to protect the community ?
3. Why was the impacts of climate change largely ignored ?

Climate Change

On the 4th March 2020 the *World Meteorological Organisation* published a definitive climate report card entitled *Statement on the state of the global climate*.

This report noted that the last five (5) years were the warmest on record; and the ongoing drought in Australia was a significant climate event and confirmed that Australia's ongoing drought and exceptional fire weather conditions were among the most significant global climate events.

How does climate change affect bushfire behaviour

1. This arises from reduced rainfall during Autumn, Winter and Summer where vegetation cannot re-gain 'lost moisture content'. This leads to the rate of 'fuel drying' increasing especially within pasture fuels and forest mulch laying on the forest floor.
2. Low fuel moisture creates the opportunity for rapid ignition and raises the intensity of a fire quickly - making early fire suppression success much harder to achieve.
3. The fire frequency increases – caused by embers having better success of starting new fires in the drier fuels. This also reduces the suppression capability markedly.

4. There is an increase of 'hotter days' (during a drought) that further dry out the fuels and their root systems – leading to, again, more ignition capability and, again, more, suppression difficulty.
5. Ultimately leading to a greater difficulty in the undertaking of ground fire suppression operations arising from the high intensity of the fire events and often the speed of the fire over ground making such operations very dangerous.

Given the atmospheric conditions being presented by the drought the fire suppression strategy used in 2019 and 2020 was unable to cope.

If one considers the whole of government response to the *corona virus* pandemic the government/s of Australia have worked together to enable a program of safety for the wider community notwithstanding the significant economic and social impact that has been caused.

No such wholistic strategy occurred during the bushfire disaster.

It was if there was no realisation that things would keep getting worse. How much warning did the RFS and other suppression agencies require ?

Why were the Police so silent during the 6 month long bushfire event ?

What we knew before the fires

We knew that landscape fuels were very dry and in the previous year the RFS had been unable to undertake all the required hazard reduction targets achieving less than 60% of their target. In drought years, with little rain, there is no excuse for that result.

Indeed we knew that weather conditions were likely to be stable as there was no end to the drought insight such that stable conditions were likely to include an *ongoing lack of rain and an increase in fuel dryness*; and a probable likelihood of normal strong winds at certain times of the bushfire season. Together these led to a probable bad bushfire season.

Drought

We had a drought that covered the years 2017, 2018 & 2019.

Drought manifests in fuel dryness and, overtime, that fuel dryness leads to fuel moisture in the roots, forest floor mass and in the leaves.

Remarkably Australian vegetation is able to resist a severe drought and most species can survive the passage of a fire – after being severely burnt.

Clearly the effects of the drought that devastated Queensland and NSW created the conditions that led to the dry Autumn and Winter which, in turn, led up to a bad fire season in the Spring and Summer period. Yet this was not unusual.

So, what was different in the years 2019 and 2020. We now know that the drought began years before over the period of 2017 mostly in central Queensland and then in northern and western New South Wales. By late 2018 grazing stocks were missing from the paddocks and what grass and or pasture was there was readily available to burn.

Over the years the involvement of farmers and graziers in bushfire management has been critical as it is their lands which, in periods of drought, become problematic and their advice and experience is a necessary land management ingredient.

In 2019 that drought became more widespread into eastern and southern NSW and eastern Queensland where the fire season typically occurs in the winter months when there is no humidity. On the whole Victoria was not significantly affected during mid to late 2019 by the drought except for the western rangelands and indeed Victoria was able to consistently provide bales of hay during the drought to the northern states.

So, why was the fuel so dry that the fires in 2019 and 2020 became so damaging. It's from one simple explanation – fuel dryness.

Fuel dryness

In a typical drought year there are replenishing rains (albeit small falls of 2-5mm) that provide moisture back into a drying landscape e.g. grassland pasture or forest mulch laying on the ground.

In NSW we have a fuel dryness index for grassland pasture fuels and it is calibrated on the basis of 'percentage cured' – (meaning virtually no moisture left in that fuel). When it comes to forest fuels it is typically assessed on the basis of the fuel dryness in the forest floor where the leaves, twigs and small branches lay. The crackling 'under foot' signifies a very dry fuel which is readily available to burn. Experienced fire managers understand that feeling and get worried when they see centimetres deep fuel that crackles under their feet.

Given the widespread nature of the drought and the lack of replenishment rains, especially in 2019, the vegetation strata simply waited for the temperatures to rise and an ignition to occur and then the fires were able to take off.

Beginning in the northern area of NSW than moving down through the hinterland and finishing on the beaches of the south coast – this dry fuel enabled the moving fires to become monstrous in size.

Firefighters were overcome and whilst they were able to have simple victories 'here and there' the overall landscape size of the fires were not able to be quelled; and the damage that resulted was significant in terms of social, economic and heritage loss.

Simply put - it is this lack of replenishment rainfall that led to ongoing drying of the fuels such that the fuel dryness index went off the scale. Extinguishing those fires then became very difficult, and nigh on impossible, given the extreme overall weather conditions that presented the fire fighters.

Atmospheric wind

Certainly, one of the elements of the recent bushfire season was the presence of high wind velocity on bad fire days. It is these strong winds that enable a catastrophic day to cause so much damage.

Long fire season

In any given year bushfires always begin in the northern region/s of NSW in July and slowly make their way south – although their impacts are mostly negligible, and the fires are small and contained by traditional firefighting efforts – generally quickly. What was

different in 2019 /20 was the intensity of the fires and the manner in which they become larger fire events.

In bad years it is certainly common for bad fires to achieve an 'emergency status' during September and or October (these being common in the greater Sydney region) but certainly not on the north coast and only rarely on the south coast.

Preparedness

We knew there had been very long drought which ultimately led to fuel dryness in a manner which we had not seen for many years. This knowledge made the need for hazard reduction works, before the oncoming bushfire season, all the more important.

We also knew that urban and peri-urban development was occurring in the hinterland landscapes from the northern borders to the southern border and this development brought population growth - often with the insufficient capability to manage their own lands in terms of bushfire protection.

The subdivision of rural areas into small acre landscapes has been a problem for fire management New South Wales well over 25 years which, along with the illicit revegetation of once pasture lands, has increased bushfire fuels such that large managed fire breaks are now much less than they were in the 50s, 60s & the 70s.

Given the increase in population density, particularly on the outskirts of urban areas ,it is not difficult to understand why people are so affected when they are so severely unprepared.

In NSW bushfire management is largely facilitated by the NSW Rural Fire Service. They do this by being the facilitator of other land management organisations and fire suppression agencies and they use a variety of coordination methods to achieve their aspirations.

In terms of bushfire emergencies, they also assume the ultimate role of NSW emergency manager and delegate sub-emergency management to delegates from either fire suppression agencies or larger land management agencies on a fire by fire basis.

The system generally works well when those emergency fires are small and remain within local government boundaries. But when the fires cross boundaries and become much larger rolling events it then becomes significant about 'who' is managing this event.

Hazard reduction

There has been a lot said about hazard reduction during the fires and after the fires. It was often heard during the fires that hazard reduction wasn't the "single panacea to solving the fire problem" being seen in NSW. This was being said in light of the impact of climate change and whether or not this type of fire was the 'new norm'.

The former fire commissioners, led by Greg Mullins, made this statement and clearly gave an impression of support for the current fire managers who indirectly made the same claim. The latter claim was mostly through their spokespeople on talkback radio and not necessarily from the fire services directorate and certainly not from the Commissioner of the RFS.

Without going into a significant technical understanding of how fires occur it is suffice to say that there is only one clear method of managing hazardous fuels and that is through hazard reduction burning (or to a much lesser extent through the mulching, slashing and mowing of low growing fuels).

Prescribed burning is another term used in bushfire management. This is not in itself a hazard reduction technique. It is an ecological burning regime applied to a vegetation community, at the right time and season, to enable that community to ecological equilibrium and from that species diversity. The reduction of hazard and that vegetation class is a by-product, but it is not the sole reason for the undertaking of the burning.

Land management responsibility

At this point in time it is important to enunciate that bushfire management in NSW is the responsibility of the land manager (that being the landowners and or the occupiers in the case of leased land/s); and is enacted by Section 63 of the Rural Fires Act which makes it very clear who is responsible for managing hazardous fuels on their lands – see extract below.

RURAL FIRES ACT 1997 - SECT 63 - Duties of public authorities and owners and occupiers of land to prevent bush fires

- (1) *It is the duty of a public authority to take the notified steps (if any) and any other practicable steps to prevent the occurrence of bush fires on, and to minimise the danger of the spread of a bush fire on or from:*
- (a) *any land vested in or under its control or management, or*
 - (b) *any highway, road, street, land or thoroughfare, the maintenance of which is charged on the authority.*
- (2) *It is the duty of the owner or occupier of land to take the notified steps (if any) and any other practicable steps to prevent the occurrence of bush fires on, and to minimise the danger of the spread of bush fires on or from, that land.*
- (3) *A public authority or owner or occupier is liable for the costs incurred by it in performing the duty imposed by this section.*
- (4) *The **Bush Fire Co-ordinating Committee** may advise a person on whom a duty is imposed by this section of any steps (whether or not included in a bush fire risk management plan) that are necessary for the proper performance of the duty.*
- (5) *In this section: "notified steps" means:*
- (a) *any steps that the **Bush Fire Co-ordinating Committee** advises a person to take under subsection (4), or*
 - (b) *any steps that are included in a bush fire risk management plan applying to the land.*

In NSW the implementation of Section 63 is mostly undertaken and applied by the NSW RFS. Importantly Section 63 focuses on the role of the Bushfire Co-ordinating Committee as the responsible agency for implementing the hazard reduction requirements aspired by the Rural Fires Act.

Despite this, in 2020, the Co-ordinating Committee has been relegated to an advisory organisation leaving the RFS as the facilitator of the overall power. In our view this is a mistake. Indeed, the RFS are not a land management agency - they are in effect a response agency just like NSW Fire & Rescue are a response agency.

The major land management agencies are;

1. NPWS
2. Forests NSW
3. Local Government
4. NSW Aboriginal Land Councils

With the lesser agencies such as

5. Sydney Water
6. Various electrical authorities

And of course large private pasture and or agricultural land owners.

Aerial fire fighting

It is certainly not unusual in Australia and particularly NSW for firefighting to be a very successful tool - the strategy 'being to stop a small fire from becoming a big fire'.

Rapid deployment of helicopters to a remote fire ignition point/s is always the first step to a successful campaign of keeping fires small.

In a bad season this requires many aircraft, initially helicopters, to rapidly attend the site and ideally larger bomber aircraft to do 'wet line' runs.

We now know that approach did not work for this fire season. There was simply not enough planes predicted (even in November) and ... not enough organisational capability (foresight) to enable that to be successful. The RFS was responsible. But where were the government and others when these decisions were not being made ?

In our view the use of aerial resources should have been a 'first principles' approach both for early detection and then for ongoing suppression - then using ground forces to focus on asset protection and to assist the blackening out edges. Direct firefighting by ground forces was not an option.

Co-operative firefighting in NSW

The most impressive part of the history of fire management NSW has been the cooperation between the relevant agencies and the eventual effective coordination of those agencies not only during times of fire events but also in the off-season, through the implementation of hazard reduction works and plan preparation and coordination.

Prior to the formation of the RFS as one State based entity there was the Department of Bushfire Services which was the prime facilitator of policy, administration and resources for all fire mitigation, suppression and management undertaken by Local government and what was then called the NSW Bush Fire Service.

Historically hazard reduction works in NSW has been undertaken effectively by the land management agencies such as local government, NPWS, Forests NSW & Sydney Water when budgets were able.

Has the co-operation stopped

Something has happened in the last 20 years. There has been a significant shift in the power of the firefighting agencies in NSW where once there was a 'cooperative and coordinated group' who would share leadership in respect of the expertise of each organisation.

That has now changed. NPWS has been gutted by government budget cuts. Forests NSW has been corporatized. Sydney Water, another large landowner and fire suppression agency, has also been corporatized. This leaves the RFS as the main player and one that is exceedingly well funded by the government.

By way of an example in 1994 Department of Bushfire Services had a staff base of 70 in head office and regions however they funded a further 100 fire control officers employed directly by local government – as they controlled their own land management responsibilities.

Now the RFS has a staff base of 850 and effectively runs bushfire management NSW as they took away fire management responsibility from local government.

It is not correct to say the RFS are responsible for the hazardous land owned by local government in NSW. But it is correct to say that local government have no capability to manage their land without the RFS.

How did we get to this situation ?

Historical development of fire management in NSW

in 1939 bushfires destroyed and harmed a significant part of our agricultural economy and human settlements alike. Something had to be done.

In response, the NSW Government acted reasonably quickly and over the following years with a lack of available men that had gone to the Second World War they instigated a financial package to assist farmers and landowners with funding to purchase equipment (small tow-along tankers, rake hoes and back packs) and in time provided assistance to local government to implement many effective bushfire management strategies e.g. public education programs road side management etc'. Then the volunteer bushfire brigade system was formed - from the land managers themselves.

The government took the next step by forming the *Bushfire Council of NSW* which effectively was the collegiate of large government landholders and rural graziers. In time this developed into a very astute system of co-ordination which led to effective hazard reduction efforts across the state. Ultimately the Department of Bushfire Services was formed and administered by a very experienced fire manager Phil Koperberg AO, AFSM, BEM until his retirement in 2012.

What was effective about what had occurred between 1939-2012 ?

It was the sheer determination of those who were directly involved to manage themselves and with co-operation and clear co-ordination between themselves. It was self help at its best.

This co-operation and co-ordination was the hallmark of the Co-ordinating Committee of NSW in the way it 'assembled' the NPWS, State Forests, local government, Sydney Water, the volunteer Bush Fire Service, the Department of Bush Fire Services (now the RFS) and importantly the farmers and graziers with the aim of working together and to 'advise government directly'.

Did it work. Yes it did. So much so that since 1939 less than 65 persons have died from the impacts of bushfires in NSW whilst in Victoria over 600 persons have died even though there has been constant large bush fire events e.g. 1939, 1968, 1975, 1985, 1991, 1994, 2001, 2003, 2007 & 2019/20.

The sole reason for such success was the system of 'co-operation and co-ordination' between the 'fire suppression agencies and the land managers' led by the Chief Coordinator of firefighting.

Any review of that system would say that it this was the sole reason why NSW has a very low mortality rate in terms of bushfires. It was a key ingredient that did not occur in Victoria and which led to the famous infighting between the Country Fire Authority and the urban fire agency after their most disastrous event being they Black Saturday (2009) fires which lost 173 lives.

In NSW the chief coordinator had all day-to-day powers provided to him by the Government. That person was typically selected from State forests due to their expertise. The chief coordinator had no other responsibilities to be concerned about other than going about his business of ensuring that fire coordination and cooperation between the agencies occurred.

Statewide dissemination and implementation of fire management regimes was achieved through the framework of District Fire Committees. Their function was to provide a co-operative and coordinated forum within the local government boundary – a highly sensible approach and one that was politically savvy.

The District Fire Committee concept has been developed and fostered to consider matters that are likely to affect local fire management arrangements or decisions. The participants on the district committees comprised elected officials of local government, fire managers, environmental representatives, land management and firefighting agencies as well as other persons/organizations likely to be involved in fire management e.g. large private landowners.

The result of these deliberations formed the basis of bushfire risk management plans. This usually comprised detailed assessment of (hazardous) fuel in the area. These plans only cover government lands. They do not cover private lands unless there is a very large landowner involved.

Then the RFS changed the equation in 1991 by making the RFS department head the chief coordinator as well as responsible for a growing fire management and administrative agency – and a fire suppression agency. The old system was lost.

In our view over the last 15 years there has been an expansion of the committee system yet there has been a reduction in the efficiency of that system to achieve effective hazard management in a burgeoning society who wish to live in bushland areas. Something has gone wrong.

So where has it all gone wrong ?

In effect we state the NSW Rural Fire Service has systematically broken the highly effective bushfire coordination system that has served this state since the 1950's.

Change was necessary and we accept that.

Sophistication was required and we also accept that.

But the RFS have assumed too much power and the NSW Government has gutted the other mainstream land management agencies such they cannot claim to operate an effective land management system in national parks nor Forests NSW - and local government is simply out of the equation !

It is our collective view that over the years, the RFS has arrested effective control of bushfire management from the land management agencies due to the state government reducing the budgets and powers of those other agencies.

It is also our view that arising from the many coronial inquiries and bushfire inquiries the CEO's of the NPWS and Forest NSW have seen the size of the dagger facing them and headed backwards away from the pointed blade of public scrutiny.

The result being the continual ascension of the RFS.

The RFS began to assert control and accumulate power to control the firefighting agencies and the land management authorities when the operational staff were put into uniform and a vertical column of power was created. We do not say this was the plan but we do say this was the result.

Staff numbers increased after every major fire event beginning in 1994, and again in 1997, 2001, 2003 and so on and no doubt staff will increase again in 2020/21.

Points of note;

- The RFS are not a land management agency yet they have a significant staff base. In 2009/10 they had 480 staff and in 2018/19 they had 936 staff.
- Yet the NPWS and Forests NSW have had significant fire staff reductions.

Without sufficient funding, those agencies cannot perform as land managers and provide the necessary works to ensure effective fire mitigation occurs.

If one adds the significant holdings of local government and the other large private landowners such as Aboriginal Land Councils, electrical distribution authorities' other large landowners then one can see a picture that bushfire management is in a parlous state.

Question:

The NSW government appears to solely rely on the RFS but can we, the community, rely on the RFS ?

Given the land managers are reducing their responsibilities then who was managing the bushfire hazards in 2019. To answer that question let's look at data supplied by the RFS and also by the Co-ordinating Committee of the Bush Fire Council (1979-1992).

Table 1 depicts the areas hazard reduced in the 2018/19 and the 2009/10 seasons.

The 2018/19 season tallied almost 100,000 ha of land 'hazard reduced' compared to 10 years earlier which was 206,000 ha.

Table 1 - Hazard Reduction undertaken in 2018/19 year

Agency	2018/19		2009/10	
	Target proposed (ha)	area Percentage undertaken	Target proposed (ha)	area Percentage undertaken
National Parks & Wildlife Service	16,852	132.2%	96,573	Not provided
Forestry Corporation of NSW	1,297	113.8%	32,215	Not provided
Crown Lands	18,854	112.2%	5,786	Not provided
Fire and Rescue NSW	4,219	57.5%	4,219	Not provided
NSW Rural Fire Service	48,450	56.7%	48,450	Not provided
Local Government Authorities (141)	8,450	64.9%	16,091	Not provided
Other	1,384	61.7%	2,800	Not provided
	99,506		206,134	

Source: RFS annual reports

Table 2 depicts the historical tally and depicts a significant difference in hazard reduction operations achieved. In terms of 'hectares managed' the difference is simply staggering. This is not all from environmental and or ecological conservatism. Something is very wrong as the hazard reductions plans are woefully underdone.

Table 2 - Historical hazard reduction undertaken

Year	Area of hectares undertaken
1979/80	1,000,000
1980/81	887,080
1981/82	51,730
1985/86	128,548
1988/89	119,942
1989/90	294,413
1990/91	768,420
1991/92	500,400

Source: Originally tallied by the author from Bushfire Council of NSW records for a speech in 1992 to Fire Control Officers at Coffs Harbour 'The burning Issue'

Problems with incident management

Incident management is the term used to describe managing a bushfire event by incident managers.

In hindsight it can now be readily seen that during the fire events the RFS were overrun with the enormity of the events before them.

Communications from and to the field were often misunderstood or late. Communications between the states was not coordinated.

Incident management of the fire events seemed to be incapable of recognising the true issues before them such that 'decisions and directives' were based on old information and intelligence.

It is now clear that incident management responsibilities grew rather than new incident managers being brought into manage new incidents. We certainly know of instances where expertise was offered but ignored.

Community meetings were attended by local brigade Captains with the assistance of RFS officers. Group Captains and Captains handled their communications to the assembled community well as they knew their turf but our observations was that the officers were in doubt about detail.

Confused messaging made things very difficult in the understanding of clear instructions and or clear directions. 'Out-of-area' brigades arriving at a staging area were often left in-wait with no directions or with no resources to find that location.

Importantly the NSW Bush Fire Brigade organisation was borne out of a system of landowners helping each other. This evolved into a network of volunteer brigades with a command system similar to the Defence Forces. This, in most Local Government Areas (LGA) was reinforced with the appointment of Fire Control Offices, responsible under the Bush Fires Act for the protection of life and property from fires.

These Fire Control Officers were responsible for the management of the volunteer brigades and directly responsible for the management of bushfires in their designated areas of responsibility and were often appointed as Incident Controllers under Section 41F of the Bush Fires Act – in charge of all fires and resources in their Local Government Area (LGA).

The Fire Control Officer was aware of his/her brigades' abilities, the community and their area of operation.

What has changed?

The RFS, in implementing the current Incident Management System, has changed the way fires are managed, placing more responsibility (and liability) on senior volunteers. This may be acceptable if the senior volunteer is a local who knows his/her 'turf'. However, the real issue is when 'out-of-area' volunteers are sent to areas not known to them.

The other change to localised fire-operational procedures is the RFS's desire to appoint an Incident Controller in the area in which the fire starts and have that Incident Controller and the Incident Management Team 'run' the fire, irrespective how far it travels, including into adjoining Local Government Areas and RFS Districts.

This is a naive incident management approach which restricts local expertise being utilised in the planning and particularly fire ground operations.

This occurred with the Gaspers Mountain Fire which was being 'managed' by the Hawkesbury Incident Management Team which prevented the 'local' Central Coast brigades from undertaking a back-burn along the western side of Mangrove Creek (similar to the successful strategy implemented during the 1994 bushfire).

As a result of this management decision the Three Mile Creek breached the potential back-burn line and spread into the villages of Lower Mangrove, Mangrove Mountain and Kulnura, destroying property and threatening the

wider Central Coast area. To combat this fire spread multiple, scarce resources were tied up for many days.

Advice from disillusioned volunteer RFS members indicates incident management issues occurred elsewhere in the State. No doubt the Inquiry will investigate this further.

We recommend that the Inquiry investigate the appropriateness and efficacy of the current Incident Management structure within the RFS.

In our view this is a major matter of concern and experience dictates that only persons of significant capability should inherit the responsibility of an incident controller.

Problems with preparedness

Fire trail maintenance

Fire trails are an essential element for gaining access to fire locations and provide effective safety for volunteers and other firefighters they must be brought to a high standard maintained that standard.

There is an obvious need to increase fire trails at the interface of bushland areas. The existing fire trail registers should be audited to assess their condition and their strategic importance.

Given the RFS are not a land management agency and don't and land they don't have the primary objective of managing their turf considering the extent of the fire trails across New South Wales the funding mechanisms for some of those trails is not enough the land management must take responsibility for themselves and not be relied only on the shillings provided by the RFS.

New fire trails

New trails should be identified for addition to the state funded fire trail register.

Decisions on importance should be made as a first principles decision with their ecological and environmental impact then determined on the basis of importance for strategic community / fire fighter safety.

It should not be the case the fire trails should be rejected initially on ecological environmental grounds at a lower management level if a fire trail has substantial value that should be considered by high level managers for that value.

Responsible land management

There is a significant lack of corporate responsibility undertaken by local government and aboriginal land councils and the effective management of their lands. They rely solely on the RFS to undertake their needs.

The government should strengthen Section 63 of the Rural Fires Act with a financial audit requirement responsive to the Coordinating Committee in each year validating their appropriations spent and the extent of work achieved.

Communications

There is an apparent lack of co-ordination between news reports/information from the media across State boundaries.

What appears to occur is the ABC regional stations are limited to reporting on information in their 'zone' i.e. the ABC South Coast was reporting on the south coast fires and not receiving information on the fires burning close to the NSW/Victoria border. This was replicated on the NSW/QLD border fires.

This has a significant bearing on being aware for those in border zones.

Aircraft

In 2019/20 New South Wales was left wanting in regard to the delivery of aircraft suitable for the fires that we were fighting. Insufficient aircraft of the size and capability must be resolved either with contractual arrangements expanded or the purchase of aircraft by a central government airwing that can use flexible plane design for varying purposes.

Given the fires across Australia from November to January a significant number of aircraft would be required.

It is also highly likely that a terrorist event could cause significant chaos on Australian shores should high altitude incendiary drops occur - creating multiple fire events.

A new direction

Things need to change.

We believe that the Co-ordinating Committee was a highly effective system that effectively reduced bushfire hazards in NSW as the numbers in Table 2 above graphically demonstrate.

The RFS are now a highly bureaucratic and cumbersome set of silos' and their capability to manage bushfire hazards has been shown to be insufficient to service the needs of NSW.

We believe that has hazard reduction in NSW should be overseen by an organisation aside from the RFS with the sole authority to protect the NSW community from the impacts of bushfires through the undertaking of effective hazard reduction where and as required.

We believe the structure for this organisation is similar to the previous Coordinating Committee of the Bushfire Council and should be able to be financially capable and physically powerful to ensure the desired hazard reduction can be undertaken effectively in each and every year regardless of the weather conditions.

This means seven days a week with sufficient resources to enable all desired plans to be implemented - not delayed by days or weeks – but still implemented through various techniques – not just ignored till next year.

We believe the new structure should mimic the federal government's approach to defence in this country e.g. the Australian Defence Force (ADF) – which seeks to protect Australia 'at all costs'.

Our belief is we do not need another firefighting agency.

Rather, we seek a dedicated hazard reduction agency with a dedicated force of permanent paid professional fire managers, bolstered by volunteers, working over a seven-day week roster 365 days per year to prepare and implement hazard reduction works and effect the delivery of those hazard reduction works in a timely and efficient manner. If not our economy will again suffer arising from the effects of climate change and irregular droughts.

We believe this should be called *NSW Fuel Management Service*.

We propose that this approach would extract suitable expertise from within the existing agencies and to develop that expertise and capability such that they would be operationally effective in a short period of time.

It would be a mistake to put this service under the responsibility of the RFS.

In our view the agencies would co-exist just as the Army, Navy and Airforce co-exist within ADF with obvious success.

The extent or aspiration of the works should be delivered by the *NSW Fuel Management Service* with a very clear strategic framework of where those works should occur and with clear funding capability to ensure those works are able to be implemented. We believe that funding must be tied to the Treasury such that in times of drought additional funds can be drawn upon.

The specific role of the *NSW Fuel Management Service* would be to;

- Reduce the bushfire hazardous fuels by all available means either through burning, slashing, grazing on unmanaged grasslands and so forth; and to
- Ecological advise and manage the needs of the environment in their works and to that extent would seek ongoing support from the NPWS and Forests NSW other scientific agencies as required.
- Implement hazard reduction within local government boundaries for local government.

- Effect quality fire trail maintenance across the state and ensuring fire trail access where and when required so that fire fighters can do their work safely. It would do so with the co-operation of landowners and the co-ordination of available resources.
- Importantly the *NSW Fuel Management Service* would fund Local Aboriginal Land Council's to undertake burning or other hazard management operations on their own lands. It is widely acknowledged that most aboriginal land councils do not have funds to manage the large areas they now own but they own significant bushfire hazards.

This agency would not be responsible for Section 63 matters e.g. fire hazard notices. That would remain with the RFS as a domestic matter.

We strongly believe the *NSW Fuel Management Service* should also have an aboriginal representative as a full member; and cultural burning should be tried and tested over an (at least) ten year period in order to properly evaluate the methods used. We do believe there is no historical evidence that cultural burning will effect any solutions for hazard reduction as needed from a broad sense but we believe there is value when used for prescribed burning operations to achieve either ecological aspirations or cultural protection aspirations.

We believe the Australian Defence Force principal should be applied in NSW with the following approach.

Emergency Management NSW as its head and comprised of the subordinate authorities such as;

- RFS
- Fire & Rescue
- Fuel management Service

Each would operate within its own charter but work within the policy and coordination framework of the head authority.

- Land management agencies such as local government would pay for hazard reduction burns funded from insurance levies and other self-garnered funds.
- Aboriginal land councils must also find funds and embrace a professional approach to hazard reduction on their lands such that they participate with the NSW Fuel Management Service.
- NPWS and Forests NSW must be regarded as land management agencies and be adequately funded to participate with the NSW Fuel Management Service or engage the NSW Fuel Management Service to undertake work on their lands.

We will not waste time here on detail. That can be provided in a meeting should you see the value.

Conclusion

It is clear that there is an opportunity for change to. We have suggested a method of change.

We also must ensure that the RFS, as a fire suppression agency, are able to engage suitable aircraft to fight these mega fires.

Hence our view that the role of hazard reduction should be separated from the professional needs of what must aspire to be the best fire suppression service in the world.

But if the firstly create the best hazard reduction service possible then the very dangerous role undertaken by the volunteers of the RFS may well be somewhat mitigated by removing hazards where the people live – before the fires arrive.

In closing we would like to thank the Commissioners for allowing us to provide this submission. We urge a strident approach for change by the Inquiry and wish you well in your endeavours.

We can be contacted on [REDACTED] or at [REDACTED].

Yours faithfully

A handwritten signature in black ink, appearing to read 'John Travers', with a large, stylized initial 'J'.

John Travers

on behalf of the Bushfire Alliance

Curriculum Vitae

John Travers

Don Nott

Graham Swain

John Travers

John specialises in the fields of bushfire management and terrestrial ecology. John has 39 years of experience in providing advice to a vast array of clients in both the private and public sectors. Between 1980 and 1991 John was a Senior Ranger with the NSW National Parks and Wildlife Service before joining the Department of Bushfire Services (1991-1993) in fuel planning and then as Manager Planning & Research. Between 1993-2018 he led a team of specialists in private practice and has provided a significant contribution to the disciplines of bushfire and ecology.

Expertise



Integrated bushfire and ecological management / forensic bushfire behaviour analysis / modelling

Conservation planning and natural resource management

Specialist in bushfire protection design planning / strategic fuel management design and analysis

Bushfire operational / evacuation planning

Ecological assessment and the provision of advice / biodiversity assessment - bio-certification and or biobanking

Bushfire ecology and the compilation of bushfire management plans for natural area landscapes

Strategic thinking with a focus on practical outcomes and workable solutions.

Industry Participation

- Foundation member and Councillor *Ecological Consultants Association of NSW (2012-2019)*
- Fairfield Council *Independent Hearing and Development Assessment Panel (1999 to current)*
- Instigated community workshops in the Blue Mountains regarding hazard reduction (2009)
- Warringah *Independent Hearing and Assessment Panel (2005)*
- Rural Fire Service PBP *Working Party (2003-2006)*
- Liverpool Council *Independent Hearing and Assessment Panel (1998-2003)*
- Assisted UDIA and the Planning Institute of Australia in their deliberations on the PBP, 2001 review (2002/03).
- Member of the *Australian Fire Association Committee (AFAC)* sub-committee and worked to develop better methods of firefighting (1992-93).

- Central Coast *Regional Catchment Committee* (2001)
- *Ecological Consultants Association of NSW* (2000-2005)
- Wyong Threatened Species Assessment Committee (2001)
- Tuggerah Lakes *Catchment Management Committee* (1998-2001)
- Tuggerah Lakes Catchment Management Committee *Natural Resources Task Group* (1998-2000)
- Landscape conservation module training for TAFE (1994)
- RFS Representative on *Taskforce Boyne NSW Sydney Bushfires* (1994) Coronial Inquiry
- Managed the deployment of aerial support during the 1994 bushfires (1994)
- Chairman of the (bushfire) *Standing Committee* of the Coordinating Committee (1992-1993)
- Coordinated a small team that travelled to Jakarta, at the request of the Australian Government, to assist the Indonesian Government on bush fire and significant smoke related problems.
- Coordinated a team identified to return to Indonesia to carry out further bush fire research work for the Australian Federal Government with CSIRO.
- Executive Officer of the *Coordinating Committee* of the Bushfire Council of NSW (1991-1993)
- Secretary, *Munmorah State Recreation Trust*, NPWS (1987-1989)
- Member of Wyong *District Bushfire Protection Committee* (1986-1991)
- Member of the *Hunter District Bush Fire Prevention Association* (1985-1986).
- Secretary, *Grabine State Recreation Trust*, NPWS – (1985)

Papers Presented

- Natural landscapes & bushfire ecology (2020)
- Fire behaviour - presentation to the Architects Institute of NSW (2018)
- Victorian Bushfires - Cooperation, Responsibility & Co-existence (2009)
- Fire Management - A Framework for the Future (1994)
- Living with Fire, Conservation & Planning Issues (1993)
- How the Players Play in the Game of Fire Management (1992)
- Fuel, Litter and Biomass Assessment - A Case Study (2003)
- Guidelines for Carrying Out Hazard Reduction Burning Operations (1990).

Don Nott

Don is a driving force for hazard reduction operations not only in the Blue Mountains area but for the state of NSW. Don is passionate about fuel management and the need for it to be undertaken on a regular basis to protect the community - his community.

His close connections with the best and brightest in bushfire management and the political movers and shakers in Macquarie Street has developed a trail of awareness for the role that hazard reduction must achieve. Above all Don is a loyal fire fighter who maintains a regular service to his volunteer brigade organisation.

Qualifications

Don Nott has held every Volunteer rank In the RFS. He was a Member of the Blue Mountains Bushfire Management Committee for 13 yrs and was the sole representative for the Volunteers on a Commissioners Committee for Mitigation

He has been officer in charge of more hazard reduction burns and wildfire events than he can remember.

Don holds the National Medal & 3 Clasps and a Commissions Commendation

Expertise

- Fire fighting
- Integrated bushfire management and forensic bushfire behaviour analysis
- Bushfire operational planning at an incident control level
- Strategic fuel management design and analysis
- Fire trail design and implementation
- Community and political consultation

Graham Swain

Graham Swain is a deeply experienced, respected and skilled Australian bushfire planning professional collaborating with Australia's environmental leaders and planners to achieve the best people protection against fires in Australian building developments.

His career progression began with 20 years as an architect and commercial-residential builder being introduced to the bushfire sector by joining his local volunteer brigade on NSW Central Coast in 1975. His first professional bushfire role commenced in 1985 as Fire Control Officer for Wyong Shire and then briefly reporting to the NSW Commissioner in 1994-96 before transitioning into Environmental / Bushfire Consulting employment and finally establishing his own company Australian Bushfire & Planning Pty. Ltd. in 2004.

Graham has been responsible for managing 10,000 incidents, 20 major bushfires and 3 emergency bushfires when he was Fire Control Officer, protecting 120,000 people on the NSW Central Coast.

He has experienced first-hand the responsibility of leading 14 brigades, 900 volunteers, equipment and supervising police, army and other support agencies during the 1994 emergency bushfires.

"Ahead of his time" reported by retired Commissioner Phil Koperberg, Graham developed an unprecedented volunteer Executive Management System including a Senior Executive Group with ancillary groups covering Communications, Canteen, Welfare and Public Relations, Training.

He introduced an overlay paging system resulting in 24 hour 4 min brigade turnout time. He developed the current NSW RFS Label dress badge and the new name of 'Rural Fire Service (RFS)'. He also introduced 2 piece bushfire fighting PPE, structural firefighting PPE for Wyong Rural Fire Service, unprecedented (within the RFS) full breathing apparatus capability for all Wyong brigades plus a GPS tracking of fire appliances in 1994 when the RFS had only just began roll-out 25 years later in 2019!

Graham was appointed by Commissioner Koperberg the Incident Controller for 3 bushfire emergencies in 1991-94 covering 800,000 hectares on the central coast including Gundaman, Mogo Creek, Denman and Ryleston.

He supervised the emergency management team including visiting CFA brigades, police, ambulance, fire brigade NSW, National Parks & Wildlife Service & Forestry, Central Coast

Volunteer Rescue Squad and support agencies. He participated in aerial reconnaissance twice daily, on call 17 hrs /day for 15 days. This resulted in preventing catastrophic fire impingement into the central coast with nil injuries, deaths or loss of properties.

Over the last 20 years Graham has been providing high-level advisory, reporting and attending Land & Environment Court as an expert witness for developments including schools, nursing homes, new residential suburbs and commercial areas, Solar and Wind Farms covering NSW, ACT, Victoria and South Australia.

He liaises with government planners, ecologists, developers, architects, builders and lawyers. Graham has high-level expertise in delivering premium results to protect the lives of people from bushfires. He has developed an extensive level of cooperation with many professional consultants in the planning sector.

Graham is passionately motivated to make a difference in the protection of the Australian community from the impact of bushfires in the urban environment which is now being aggravated by changes in fire behaviour linked to climate change