17 April 2020
NSW Independent Bushfire Inquiry Secretariat
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This is an individual response to the bushfire enquiry. I live in Bundanoon where the Currowan fire became the Morton fire and on 4 January, unexpectedly a pyrocumulus cloud dropped fire onto our town although the Morton Fire was still many kilometres away. It was the same night Wingello burned.

My response is based on my community involvement, where under the auspices of the Bundanoon Community Association my wife and I letterboxed the town with fire preparedness information and organised a number of community meetings culminating in a Fire Preparedness Expo on 9 January. Many lessons were learned.
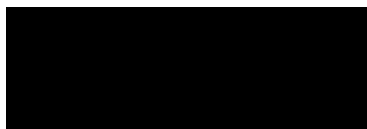
My response is also informed by my profession as a (recently retired) Information and Communication Technology specialist and Manager. There are gaps in the information provided and a lack of transparency to provide updates and request clarification of the technical resources to assist with fire and disaster preparedness and management.

Although this submission offers many suggestions, perhaps the single most important is to reframe the message "too late to leave" to the message "safer to stay". This simple change will save lives.

I have placed my responses in the appropriate sections. If the panel considers they belong in other sections, please move them.

I am willing for this submission to be placed in the public domain.

If you require further clarification, I am happy to assist.

Andy Carnahan

Andrew Carnahan

TERMS OF REFERENCE

1. The causes of, and factors contributing to, the frequency, intensity, timing and location of, bushfires in NSW in the 2019-20 bushfire season, including consideration of any role of weather, drought, climate change, fuel loads and human activity.

- *Addressed*
    - *Climate Change acceptance*
    - *Forestry cradle to grave for plantations*

2. The preparation and planning by agencies, government, other entities and the community for bushfires in NSW, including current laws, practices and strategies, and building standards and their application and effect.

- *Addressed*
    - *preparation and planning by individual and community actions*
    - *Fire plans are critical and must be tested*
    - *Pre-evacuation planning*
    - *Using Cloud storage*

3. Responses to bushfires, particularly measures to control the spread of the fires and to protect life, property and the environment, including:

immediate management, including the issuing of public warnings

- Addressed
    - *Too late to leave – fatally flawed message*
    - *Shortcomings in Emergency Alert system*
    - *Fires Near Me limitations*
    - *Radio Scanner as most important real-time app*

resourcing, coordination and deployment

equipment and communication systems.

4. Any other matters that the inquiry deems appropriate in relation to bushfires.

Matter 1 - The causes of, and factors contributing to, the frequency, intensity, timing and location of, bushfires in NSW in the 2019-20 bushfire season, including consideration of any role of weather, drought, climate change, fuel loads and human activity.

1.1 Climate Change / Science Acceptance

There is considerable irony that to link the 2019/20 fire season with Climate Change was seen as political suicide and by some politicians as a Marxist conspiracy by the loony left green fringe.

Yet Australia's peak scientific advisory bodies make it absolutely clear that climate change will cause longer and more intense fire seasons. Both the CSIRO and the Australian Academy of Science have large amounts of information on Climate Change.

There is a critical need for politics to accept science. There has been no denial of medical science with COVID-19, yet with Climate Science during the fire crisis there was denial.

Many rivers in regional NSW dried up in the drought. The ground dryness index was zero across most of the State. State Parliament seemed unaware. When I reported the Shoalhaven River had stopped flowing at Oallen Ford I was "thanked for my interest". A MAJOR river had stopped flowing for many kilometres and there was no call to action. It all just rolled along.

Recommendation: THAT NSW Parliament accept the science of Climate Change as described by peak science bodies. THAT NSW Parliament pass a motion that "This Parliament accepts the science that Climate Change is casual in the duration and severity of Fire Events

1.2 NSW Forestry has responsibilities outside the plantation

One aspect of the Wingello fire, and others near plantation forests, is the role pine plantations have in creating fuel load. Pine plantations are important as they provide a valuable raw material.

However, over the years, the pine trees send seeds downwind. In Wingello, much damage was caused by large pine trees. Forestry should be required to control "escapees" from their plantations to reduce the fuel load.

Recommendation: THAT Forestry Corporation NSW is required to manage pine trees that seed from their plantations.

Matter 2 The preparation and planning by agencies, government, other entities and the community for bushfires in NSW, including current laws, practices and strategies, and building standards and their application and effect.

2.1 Communities and individuals can respond and come together quickly

As a member of the Bundanoon Community Association in mid-December I approached the committee and asked about having a fire readiness public event.

Events overran us and the RFS held an emergency briefing on 28 December preparing us for the Currawan fire that would be 'like no other any living person has ever experienced'. That packed our hall.

We held another meeting on the morning of 4 January, however this was somewhat overtaken by Fire and Rescue who had moved into a 'combat agency' role and it was not a consultation simply a briefing. It was 40 degrees at 11am and then that evening the fire cloud collapsed over Wingello, and in Bundanoon. We lost houses.

 After this, we organised another event on Thursday 9 January, this time a fire readiness expo. It was difficult to get an RFS representative from Bundanoon, however another unit was able to send two people. We also had most of the social help agencies as well as other community groups.

This was great success, as much a chance for people to discuss their experience with each other as to gather information from providers and community groups. There was a strong focus on defining a fire plan – not just a casual discussion but a written and agreed plan. After the fire event of the 4th, many fire plans were discovered to be useless, and many were ignored.

Public gatherings with only a single speaker at a time are challenging as they are one-way and only the loud audience voices have a say. They have a role in a crisis.

Community preparedness expos are very effective to bring people together when an event is imminent, while there is a crisis and after the event. Many communities already do this and they should be encouraged.

See the Appendix for material from the Expo and also a Powerpoint Presentation (Fire Meeting.pdf) that was to be used on the 4th of January.

2.2 Fire Plans are critical and must actually be tested

Like an untested fire extinguisher, an untested fire plan may not work at all or may be faulty.

Developing a fire plan and practising that plan are critical. The RFS has a document, but there is much room for improvement. There needs to be additional sheets for testing. My wife and I 'practised' our evacuation plan three times, each time because there was a real threat. Each time there were subtle changes.

Having a fire plan is critical – in a crisis it allows you to rote follow the plan, much like St John Ambulance uses DRSABCD to help us effectively manage first aid in a crisis. Following by rote is the ONLY way to reduce panic and allow us to function under life-threatening danger.

Recommendation: that the fire plan section of the RFS preparedness document is expanded to allow for testing, review and refinement.

2.3 Pre-evacuation planning

When fires are imminent, pre-evacuating is an effective measure to reduce stress. Some precious items are moved to a location that is away from the fire path. Having to remember 'everything' in critical time, especially when there are other anxious people and animals means things can easily be forgotten, cars overloaded and a dangerous situation compounded.

We moved some precious items to a relative and others to a nearby friend in a lower risk area. We also left some precious items behind, accepting that in a fire, we would lose some things but not everything.

2.4 Using cloud storage as part of a fire plan

After family and pets, memories in the form of photographs are the next item packed. This can be boxes and boxes of albums and photos. When we practised our fire plan, just having ourselves, our pets, their bedding and food, our go bag, extra clothes/gloves etc meant our car was full. There was no room for memories.

Some months before I had digitised 20 years of photos and placed them on a Cloud storage service. Even though photos are often not looked at they are still an important part of our lives and memories.

I could leave the original photos in the house, knowing they were safely stored. This removed a lot of worry and reduced the baggage in our car.

RECOMMENDATION – THAT Cloud storage for photographs is encouraged as a way of removing the need to evacuate physical photographs

Matter 3 Responses to bushfires, particularly measures to control the spread of the fires and to protect life, property and the environment, including:

> *immediate management, including the issuing of public warnings*
> *resourcing, coordination and deployment*
> *equipment and communication systems.*

3.1 TOO LATE TO LEAVE – THE RIGHT MESSAGE TOLD THE WRONG WAY.

The message "Too late to leave" triggers a panic response. It is intended to keep people in place, but instead it makes us want to flee. The term 'amygdala hijack' describes how perceived threats are not processed rationally but overridden by our amygdala – the 'flight/flight/freeze' centre. In a perceived crisis, the amygdala always wins!

Changing this message to "Safer to stay" will save lives and is the single most important messaging change that I sincerely hope can come from this enquiry.

Instead of being processed rationally (in the frontal cortex) it is overridden by the fight or flight amygdala. What is does is makes us want to run. Outrun the danger.

In early January, as part of our community response, we had arranged a community meeting to discuss the approaching firefront and wanted to rephrase the message, or at least have people appreciate the intent of the message rather than the emotional response.

"Too late to leave" evokes panic. Indeed on the night of 4 January, when Bundanoon received the "Too late to leave" message, it provoked a number of people, including those who said they would heed the warnings and stay in place, to jump into their cars and drive THROUGH FLAMES to escape (in their mind) the ongoing inferno that would surely incinerate them. It wasn't their fault, they were responding to an amygdala hijack. We all will. We need to change the wording of the message

THE MESSAGE IS WRONG. The intent is right.

The message needs to be SAFER TO STAY. Even just reading "Safer to stay" is reassuring. You haven't messed up, you aren't doomed. It is safer to stay.

SAFER TO STAY – "*OK, it's now more dangerous to leave than to stay in place. The roads may be blocked by fire. I'll invoke my shelter plan. It's safer to stay*".

TOO LATE LEAVE – "*Oh my God, I've messed up again, I've missed my chance, if only I can drive really fast I can outrun it, there's still a chance I'll make, better than burn to death here.*"

Critical *Recommendation: Change the messaging from "Too late to leave" to "Safer to stay".*

3.2 FIRES NEAR ME – Great but…

Fires near me is a wonderful app for near-time fire information. It is not a real-time application, by that time it is not fast enough in its updates. It also is only as good as the information provided back to the mapping staff.

On the night of January 4th, suddenly large areas of Bundanoon, including the entire Morton National Park near Bundanoon went from no fire to covered by fire. There was no explanation and people started to panic. When "Too late to leave" appeared shortly after that, many people decided it was time to leave. And did so. Blocking roads and creating another emergency.

Fires Near Me was also mapping as fires, locations where people were reporting fires from. One resident in ▮▮▮▮▮▮▮ (where we live) had his house reported as an 'out of control fire', listing his physical address. In fact, he was reporting a fire some 200 metres from his property.

In real-time, Fires Near Me is very challenging.

Later, on 25 January, after a large emergency backburn of the Morton National Park, the fires Near Me for the Morton Fire, went to Watch and Act at about 10pm. It was a very still night, yet everyone in Bundanoon using the App went from calm to high anxiety.

I rang the fire control centre and was gruffly informed there was "nothing to worry about and now I had been informed, so the sooner you get off the line the sooner I can manage fire trucks".

Sorry, but not good enough! I understand your pressure and the stress. You are doing your job to reduce pressure and stress for the entire community, not to heighten it.

I rang the main RFS headquarters where a much more polished person (admittedly away from the immediate stress) was able to hear my concerns, indicate the alert should have been given context and shortly afterwards, the context was provided. It

was a very localised flare up in Penrose but this was not noted so we all sweated so more.

Recommendation: the limitations of Fires Near Me in real-time needs to be publicised.

Recommendation: If a status changes in Fires Near Me, especially if it is an escalation, a corresponding note MUST be added to that Fire to give context to why the status has changed that is location specific.

3.3 Confusion and lack of updating of The Emergency Alert System

The National Emergency Alert System website (emergencyalert.gov.au) has not been updated for several years and urgently requires updating. It also requires clear contact emails and most critically ownership.

As the Currowan fire became the Morton fire I urgently sought clarification about the workings of the emergency SMS system.

The Emergency alert site did not clarify if the system was carrier agnostic, like the 000 service, or was carrier dependent. It was extremely challenging to get answers to what is a simple and technically binary question – it does or it doesn't.

I also discovered the content of the site was woefully out-of-date. From the content, it appears this site (and the emergency SMS) was quickly put together after the disastrous Victorian Fires of 2009. If anything, this site demonstrate that websites do not maintain themselves!

3.3.1 There appears to be no ownership of the content. The page http://www.emergencyalert.gov.au/contact-us.html states "For enquiries about the **administration of the system** contact the relevant State or Territory listed below".

I contacted by email all of the agencies where an email was provided. The NSW email address (since removed) bounced. Victoria sent it o a general Customer Service Team and Queensland said get back to NSW. Via phone I was able to contact a Policy Analyst at NSW Office of Emergency Management who still was not able to provide a binary answer to my request about the messages being carrier agnostic. I provided feedback to pages that are out of date and was informed they would be updated – this was 8 Jan 2020 – the pages are still not updated as at 16 April 2020.

Clear ownership with effective enquiry channels is urgently required. The Emergency+ smartphone app, although national has clear ownership and F&R NSW will promptly answer questions about the system. I would suggest given how well

F&R NSW manage Emergency+, they be approached to manage the emergency alert program/process as a national custodian.

3.3.2 There is no clarification that the system is carrier dependent (carrier agnostic) which creates confusing messages. In Bundanoon in Dec/Jan, there was a newly commissioned Telstra tower but Optus customers were serviced by a tower in Moss Vale. When an alert went out for the Bundanoon area, Telstra customers in Bundanoon received the Telstra alert but all Optus customers in the Moss Vale tower area all received the alert.

3.3.3 The system requires consideration to be carrier independent/agnostic, similar to the 000 service which will send the call via any carrier

The site needs to clarify exactly how the SMS messages are sent at present if it remains non-agnostic.

3.3.4 The FAQs needing urgent updating. The 2G network has been turned off. There are now three very important apps that all smartphone users should have Emergency+, Fires Near Me (NSW, and other state based apps), Live Traffic (NSW and other State based apps). The NBN section needs updating with a recommendation that VOIP phone users have a small UPS to power their IP handset as well as the router in the event of a power failure.

3.3.5 Consider working with ACMA to provide an opt-in to have the apps installed by default as part of IOS or Android in each State

3.3.6 The fact sheet http://www.emergencyalert.gov.au/images/stories/FACTSHEET_Be_Mobile_Phone_Prepared_for_a_Disaster_October2012.pdf is, as the date indicates, terribly out of date. There is no mention of any smartphone applications and the single mention of apps refers to the now obsolete em.gov.au. It also says to keep a digital camera handy with charged batteries.

3.3.7 The site http://www.emergencyalert.gov.au/ is an unsecured site

RECOMMENTATIONS

- *THAT Fire and Rescue NSW be funded and tasked to update and maintain the emergencyalert.gov.au website*
- *THAT the SMS alert system be investigated to be able to send messages from any carrier to every mobile in a tower's range, regardless of each mobile's carrier*
- *THAT the website be updated to provide information that is current including smartphone apps and VOIP handsets*

- *THAT all smartphones purchased in Australia have critical emergency apps pre-installed as part of operating system*
- *THAT the fact sheet is updated to provide information that is current including smartphone apps*
- *THAT emergencyalert.gov.au is upgraded to a secure (https) site*

3.4 The value of the "illegal" scanner radio app

As we huddled together in evacuation centres, in our houses in Bundanoon, in our "leave early" refuges, one application stood above all the rest. It was an app called Scanner Radio that broadcast the conversation with our Fire Control Centre (Wollondilly) and the units attending the fires in and between Bundanoon and Wingello. On the terrifying night of 4 January 2020 as a pyrocumulous cloud collapsed above us, our Radio Comms Channel had the most streams in the world, from memory some 1,700 with the next being the Boston Police (I think) with less than 300.It was an extraordinarily useful information resource, being recommended on community Facebook pages for its value in realtime.

Fires Near Me deserted us. We went from nothing nearby to a massive polygon that encompassed our National Park and huge swathes of Bundanoon. It was functionally useless. Of course, it relies on information being passed back to a GIS function but in the actual fireground it lost any effect. It appeared everything was burning.

The Scanner Radio was our information lifeline. We knew what was burning, what was out of control, when there was real stress and when the worst was over. This by the urgency and the tone of the transmission. As an aside, the professionalism of the mostly volunteer resources, and the controller was astonishing. It created confidence that the situation was being handled with the best resources and skills.

The Scanner Radio was threatened to be blocked as a knee jerk reaction by someone over-reacting in the RFS.

I understand (from an RFS member) there is a secure override for sensitive communication, such as serious injuries so these details are not on an open channel.

The Scanner Radio was THE SINGLE MOST IMPORTANT communication channel on the worst night for Bundanoon. It is real time not near time.

Like all of the other applications and communication channels this has its limitations. It is not the full picture, but in the absence of any picture it is valuable. These limitations need to be understood so it can be used to the best of its advantages.

RECOMMENTATION –

- *THAT the emergency communication channel remains an open channel for radio scanner apps as it provides real-time information in emergencies that no other information source is able to provide*
- *THAT the emergency communication channel is promoted as a useful information source in real-time emergency situations*

<<submission document ends, appendix follows>>

Appendix – Community fire readiness expo material See also the presentation Fire Meeting Master (PDF)

> **Lovely Bundanoon** shared a **post.**
> 8 January · 🌐   •••
>
> FIRE READINESS EXPO
> Bundanoon Soldiers' Memorial Hall
> Thursday 9 January 10:30am to 12:30pm.
>
> On behalf of the Bundanoon Community Association we invite all residents and visitors to drop in to a Readiness Expo tomorrow (Thursday Jan 9th) in the Hall . It is an opportunity to revise your fire plans, get information on pets and wildlife care, learn more about resilience and how to work through crisis events. Just as important, it is an opportunity to offer your skills and assistance to the organisations already in Bundanoon providing services to the Community.
>
> The expo is a 'marketplace' to share ideas and information. We will have tables with volunteers to provide: RFS and CFU community information Wildlife care water/feeding/first aid care in affected areas Caring for your pets during fires and evacuation Resiliency and emergencies – Australian Red Cross Technology table – to get the vital apps: Fires Near Me; Emergency+ and Live Traffic installed on your smartphone and explained to you Help for elderly neighbours – keeping in touch, keeping them safe Help offered / help needed exchange. Can you offer help / do you need help? Men's Shed, and other community groups will have tables Ideas exchange – write your ideas / experiences / lessons / insights onto brainstorming sheets – perhaps for a later JCG article.
>
> Tea, coffee and water will be provided.
> Drop in anytime after 10:30 and before 12:30.
>
> Hope to see you there
> Lyndell Giuliano and Andy Carnahan
> For the Bundanoon Community Association

Post on the Bundanoon Community Facebook Page inviting people to the expo

Inside the Expo on the day

An image on the day – a light-hearted take on a serious topic

One of the expo tables – the Community Association donated buckets for people to keep filled with water outside their doors for stray embers. It was dubbed the Bundanoon Bucket Brigade.