



Your details

Miss

Title

First name

Kelly

Last name

Small

Email

australianbushfirehelp@outlook.com

Submission details

I am making this submission as

A resident in a bushfire-affected area

Submission type

I am submitting on behalf of my organisation

Organisation making the submission (if applicable)

Australian Bushfire Help

Your position in the organisation (if applicable)

Owner/ Operator

Consent to make submission public

I give my consent for this submission to be made public

Share your experience or tell your story

Your story

I have a background in Environmental Science so have a large network of contacts across Australia with groups and organisations involved with various types of environmental work.

I was impacted when the fires first started in 2019 as alerts were immediately raised by wildlife rescues as to an influx incoming injured wildlife. Henceforward, I followed the bushfires trajectory as it moved down the east coast of Australia and keeping in

contact with the rescues as each of them were impacted and needed additional support to provide care to the wildlife coming in. The fires arrived on the Central Coast at the end of October 2019. The Mt Gaspers fire was ignited by lightning.

I was at work one day. At that point we were not under any urgent significant threat. I had the firesnearme app on my phone with a 30km radius alert set up around my home. On that day there were a series of dry lightning storms. Within the space of 2 hours 7 fires were ignited in my 30km zone. I was given permission to leave work. The journey home would take 2 hours on a normal day. However due to the storms in the Hornsby area there were tree falls across the train line and the trains were temporarily shut down. It was a stressful start to the bushfire season. I eventually arrived home 6 hours later. Some of the fires ignited on the Central Coast were still out of control. One of these was the Mt Gaspers fire.

From that day I had to be on alert every day, check the predicted weather- temperature and winds and determine if there was a possible risk for the fires to escalate. I followed the "28 Rule" Temperature under 28 degC, humidity over 28%, wind speed under 28km/h then it is less likely the fire will escalate that day, so I was safe to leave my home and commute to work.

As the days progressed the fire hit within a 20km radius of my home and my employer gave me permission to work from home. My immediate concern was if the fire moved through the Hawkesbury, the trains could be shut down and I would not be able to get home. The day I asked for permission I had commenced my commute to work and there was no visibility at all on the Hawkesbury River. I decided to return home.

The fire did not cross the Hawkesbury. Our local RFS provided invaluable updates on their Facebook pages. They also responded to questions when their time was so stretched with fighting the fires.

My home was safe, the bushfires impacted people across the region. I heard many of their stories. Our community was at a heightened alert level from October 2019 until the fire was extinguished in February 2020. I was grateful for having access to technology. Our phone, power and NBN were not interrupted. These are vital during crisis. I relied on Facebook community groups & Facebook pages -ABC Central Coast & our Local RFS to get information and pass it on to my friends. People would often comment on posts and post photos to update what was going on in their region, so we knew where the fire was and where it was heading. I have included a document of some images shared during this time.

The week before Christmas the Gosper's Mountain fire was more active in the Blue Mountains region. I travelled to the Snowy Valleys to pick up my Mum to bring her back to the Central Coast for Christmas with the family.

As I drove into Gundagai, it had been 6 months since my last visit. My stomach sank as I looked at the hills. The Central Coast was dry currently - everywhere the grass was brown. But what I saw in Gundagai was another level. Every hill was bone dry. It was just brown as far as the eye could see. My Mum had not mentioned anything to me about the dryness in the region. Perhaps, because when you see the landscape every day you do not tend to notice the gradual changes so much. But in 6 months it had changed. I would say the land and surrounds looked unnaturally 'unwell'. When I arrived at my Mum's home, my keen gardener mother was so proud to show me her garden & all the work she had been doing. I did not have the heart to point out all

the plants that looked clearly in a struggle for survival, the brown lawn, and the general parched look of the yard. I was saddened because I could see the region was suffering. May locals did not draw any attention to it, as we all know other regions had been suffering significantly from drought and this was not (yet) as severe as what other regions were enduring. But I could feel the dryness everywhere. It was on a whole different level to what we had on the Central Coast.

We headed back to my home on the Central Coast and arrived Christmas Eve. Snowy Valleys was safe. No fires. Mum could enjoy her Christmas, so we thought.

I got an alert on my phone on 28th December that a fire had started within 20km of Batlow. I was not worried as I thought it would be extinguished within 24 hours. I did not tell Mum as I did not want her to worry. The next day, I got the updates. It was not looking good. The fire had started by a lightning strike, like Mt Gospers fire. The next 2 weeks was a whirlwind of change and devastation.

A persistent wind overnight created a direct diagonal line driving the fire straight toward Batlow. It was almost too much to believe. And then the wind changed direction the next day. So, the line of fire became a wall of fire moving over the whole region. I have images of this in my attached file.

In contrast, the huge Gospers Mountain fire on the mid-north coast took nearly two months to burn through 440,000 hectares. The Dunn's Rd fire literally doubled in size every 24 hours and became a mega fire in 7 days. The only sense I could make of it, was from having seen the parched land in the Snowy Valleys, a week before. The Central Coast, although dry, was not parched. I believe this had a role to play in how quickly the fire spread. Snowy Valleys was so vulnerable due to the condition of the land. This was demonstrated by how quickly Dunn's Rd fire took over the region.

On January 1, our New Year was celebrated with a notice to evacuate. This was given to everyone in Batlow. The town was deemed undefendable. There was one road in and one road out. Once those roads were closed in high country no one could get in or out. Mum stayed with our family on the Central Coast. We kept in contact with residents in Batlow.

Once the Dunns Road fire started approaching the rural properties it was something I will never forget. Farmers had 48 hours notification to relocate stock or do what they could to protect their properties and minimise their losses. The fire was coming - that was the only certainty. It was a traumatic experience before, during and after. The images of devastating stock losses were on National news, much of it too graphic to show. I heard a lot about the devastation firsthand from locals. It has impacted me for life.

Dunns Road fire hit Batlow 4 January. It is difficult to write about. Words can never really describe that day. We knew people had stayed to defend. We knew NSW RFS had bravely stayed to defend the town, putting their lives at risk. At one point, we had received an aerial image of the fire taking over the town (I have included these images in my attached file). We did not sleep. All we could think of was the people that stayed, how huge the fire front was & if the town would survive.

David Harrison from Goulburn died of a heart attack while defending a friend's Batlow home from the inferno. No other lives were lost.

- 183 homes were lost with many more damaged
- untold damage to farm building sheds and machinery

- Miles and miles of fencing and stock losses
- over 30% of the soft wood plantations plus significant hardwood resources

Terms of Reference (optional)

The Inquiry welcomes submissions that address the particular matters identified in its [Terms of Reference](#).

1.1 Causes and contributing factors

It was estimated the number of firefighters on the ground fighting the Dunns Road fire to be more than 500, armed with more than 100 fire trucks and 15 aircraft as they work to contain the massive fire front. More than 120 pieces of heavy plant equipment, clearing debris and establishing and consolidating containment lines.

As noted in my story, the dryness of the land I believe played a significant factor in how quickly the size of the Dunns Road fire grew as opposed to Mt Gospers fire on the Central Coast. Both became mega fires. Mt Gospers fire took 2 months. Dunn's Road fire took 1 week to reach a similar size.

1. Climate Change:

As an environmental scientist I aware of long-term land management factors which I firmly believe have played a role in the weather changes in Australia. Climate change is a global issue with many factors contributing. However, there are some in Australia, I believe we can control in the short term to contribute to mitigating its impacts on the Australian climate.

Industrialisation, as most people now are aware has increased for decades and carbon dioxide, CO₂ has subsequently increased in the atmosphere.

CO₂ and atmospheric warming go hand in hand.

Trees are a natural sink for carbon. By reducing atmospheric carbon dioxide, they subsequently contribute to reduction in atmospheric heat.

Transpiration:

Taking in CO₂ they produce not only oxygen but also water, through a process called transpiration. Australia is the driest continent on earth. We are in drought. We need more water. Our land is parched. Transpiration is the name of the process for trees producing water. Yet, we have been consistently cutting down one of our main sources and supplies for water daily. Satellite images show clearly where forest once was - and exists no longer, across the Eastern seaboard of Australia.

2. Logging:

The logging patterns in NSW and Victoria have not considered current science.

The older the forest the more resilient it is to fire. Old growth forests are much more resilient and able to recover.

Disturbed Forests:

Once a forest is logged and left to regrow- it is 'disturbed'. Disturbed forests are more fire prone. It can take over 70 years

for a forest to regain resilience to fire and restore ecosystem balance.

Less fire resilience:

When a coupe is logged, the regrowth is young forest- this is more fire prone and less resilient to fire ie it is more difficult for the trees to rebound after being burnt. Resilience can be based on tree diameter. A smaller tree diameter (ie younger tree) can imply less resilience to fire which directly correlate to the age of tree.

The frequency of fires in the last few decades has escalated above what forests are naturally evolved to endure. Their recovery time between fires is getting less and less. We have old growth tress older than 400 years, which implies they had not been impacted by a severe fire for a period of over 400 years. That is no longer the case, with frequency now falling into a time frame of less than 10 years.

Scientists are now predicting some forests, (particularly younger forests) will not rebound due to ecosystems already been disturbed by logging processes and the severity and frequency of bushfires across large regions.

There are maps of logging coupes over the last few decades, when put together basically a whole region of bushland has been logged within a period shorter, than what it would take for the forest to have sufficient time to recover, to become resilient to bushfire (minimum forest recovery time 70 years).

Scientists agree that ecosystems in Australia now are on the brink of total collapse.

Old Growth forests need protection. They need to be left alone. They should be listed as World Heritage. They are the last remnant of undisturbed forest in Australia, that contain species and ecosystems that take hundreds of years to establish. As fires are now occurring more frequently, ecosystems do not have hundreds of years to re-establish. They have a few years before the next fire hits. If we lose old growth forests, we will never be able to regain certain species again and their ecology will be lost forever.

I would have hoped government policy would follow the current scientific evidence relating logging native forest to increased fire intensity and vulnerability.

I am not anti-logging. I believe logging in plantations is sustainable when managed correctly. I do not support clear felling of native forests and old growth forests, that provide protection and sustain critical habitat that is being destroyed now by multiple factors.

But I can provide the scientific references for the information I have noted if required.

A revision of the long-term economic viability of logging is needed, to create an industry that is sustainable with the current predicament of climate change and bushfire escalation in the coming years.

To slow the impact of global warming in Australia - we need carbon sinks to reduce atmospheric CO2 levels which directly correlate to increase atmospheric temperatures. Trees are a natural carbon sink. Australia, the driest continent on the planet has been enduring an extremely prolonged drought. We need water. Trees transpire. They release water into the atmosphere.

We need more trees planted and old growth forests protected, not cut down.

1.2 Preparation and planning

Hearing and seeing in part what farmers went through in Snowy Valleys and Snowy Monaro as the Dunns Road fire loomed was horrendous. In general bushfires provide a limited time window to prepare a response to protect one's home, land and property. It was a desperate scramble to save and move what livestock they could in the time they had. Facebook was filled with posts with requests for trailers, horse floats. Communities stepped up and the coordinated effort to help was remarkable. For those that could not be moved in time, farmers had to just cut their fences and leave their stock in the end. Firefighters broke down (as I was told by firefighters after). They saw sheep and cows in the middle of paddocks burn alive. The firefighters were helpless to do anything. It was a nightmare worse than any I could imagine. The suffering of these poor animals, the farmers who owned the stock and all those that witnessed the impacts of the fire and the aftermath, will never leave the memories of these communities.

We have a huge number of trucks in NSW. It would have been good to have seen a coordinated response from a government department – perhaps this could be investigated by the new Resilience NSW. Coordinating trucks to these landholders and farmers to get their stock moved to a safe place. It does not always have to be far, just far enough away from the fire. If these farmers had had more help they could have saved more of their stock.

The cost of getting trucks to help- would not only provide employment to truck drivers, but also prevent a massive loss of stock (and \$) and prevent animal suffering - provide better animals welfare and minimise the mental and emotional trauma endured by all that were a witness to the impact of the Dunns Road fire in the rural regions.

1.3 Response to bushfires

Firefighting is not my area of expertise (including hazard reduction burning, back burning etc). All I can say if I am forever grateful to our fire fighters. Their bravery and relentless hard work saved lives and properties. They kept us safe. I believe the whole East Coast of Australia could have been destroyed. I have seen Sydney burn before and I saw it could have happened again- cities are vulnerable just as regional areas are.

My greatest concerns were for the elderly & vulnerable people without access to phones and technology for communications. I know NSW RFS do door knocking for evacuations - this is essential. We need to be able to account for every member of a community & know if they are safe and if they need help with evacuating.

I saw telecommunications fail - then people that could, relied on the internet - Facebook messaging I know was used to request someone to call 000 on behalf of a resident that lost telecommunications as fire hit the boundaries of their rural property. As many of the alerts from NSW RFS used were through the - such as firesnearme apps, Facebook & Twitter or via websites these communication services do get shut down some point in bushfire regions whether it be fire or tree falls.

I am just so thankful that no more lives were lost. It could have been a lot worse. Everyone that I have spoken to including experienced firefighters said they had never been confronted with fires like this. Our fire fighters saved our lives and protected our communities. They did the very best they could. I am forever grateful for their efforts and service and bravery.

1.4 Any other matters

I would like to raise the issue of development plans continually challenging existing koala populations of koalas. Koala's should be listed as endangered - their status has changed significantly since the bushfires and I understand this is now under consideration.

Koalas consume a huge amount of eucalypt foliage in their lifetime. They are keystone species in eucalypt forests. Eucalypts have a huge amount of leaf drop. One of the comments made throughout this bushfire season was the amount of fuel load in the forests.

The dryness in the landscape also leads to more leaf fall. I do not know if you have had a eucalyptus tree in your yard, but one tree can easily cover a whole yard with its leaves - imagine thousands of these trees in forests. This is all fuel for the bushfires.

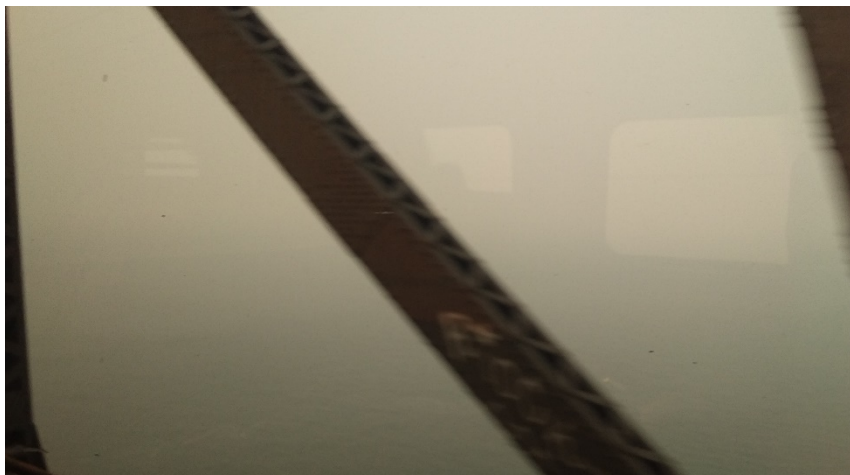
With koalas' populations dwindling for multiple reasons - constant loss of habitat due to land clearing and development, roadkill, introduced predators - dogs, foxes, cats and natural predators, drought, and bushfires - the millions of koalas that once populated Australia no longer are here.

Some predictions are for the extinction by 2050, and that could be a conservative estimate. I love koalas, I do not believe any native animal should have to justify a reason for its protection from disturbance. However, it is an unfortunate reality of our times that they do. They must have people advocate for their survival otherwise they will be wiped of the map. As an essential part of the ecosystem, they harvest leaves. A huge amount of leaves. They are naturally an aide to minimise the intensity of bushfires as koalas reduce fuel load for the fires to burn. They need their habitat protected now more than ever, no more exceptions. Right now every exception continuing to be made, which permits destruction of koala habitat, will drive them to extinction, perhaps before 2050.

Supporting documents or images

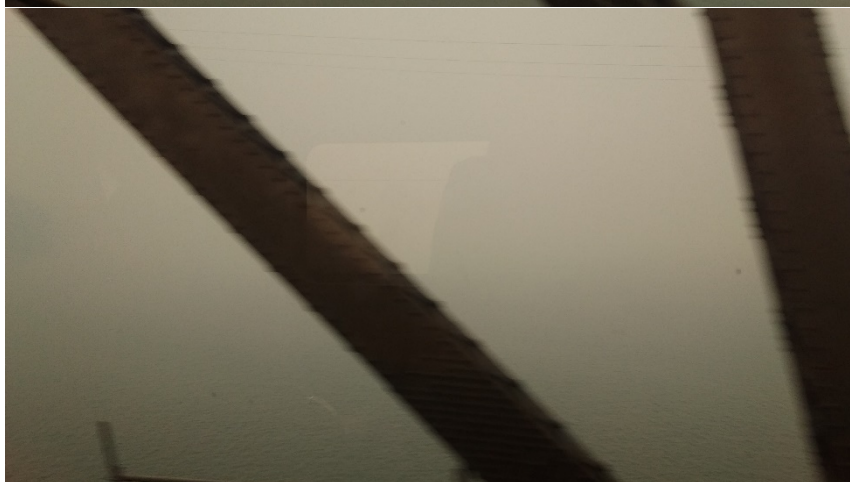
Attach files

- Kelly Small Photos December 2019 NSW Bushfire Inquiry .pdf
-

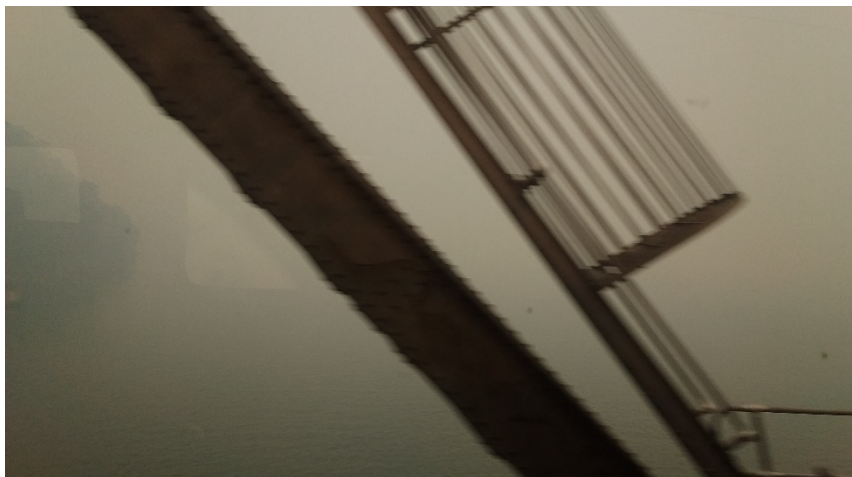


These are images taken in December 2019 on my train commute to work through the Hawkesbury River. I requested to work from home after this day. The white is smoke seen through the window of the train

The first images are taken going over the River on the bridge. Water is usually seen on a normal day.





















The images on the left show the Hawkesbury River during December 2019. The images on the right were taken before the bushfire hit the Hawkesbury & Central Coast LGA and reflect the view from the train line on a normal day.











The images on the left were taken at Woy Woy Train Station November 2019. The images on the right are the same location on a normal day, Brisbane Waters usually clear and blue, before the bushfires.



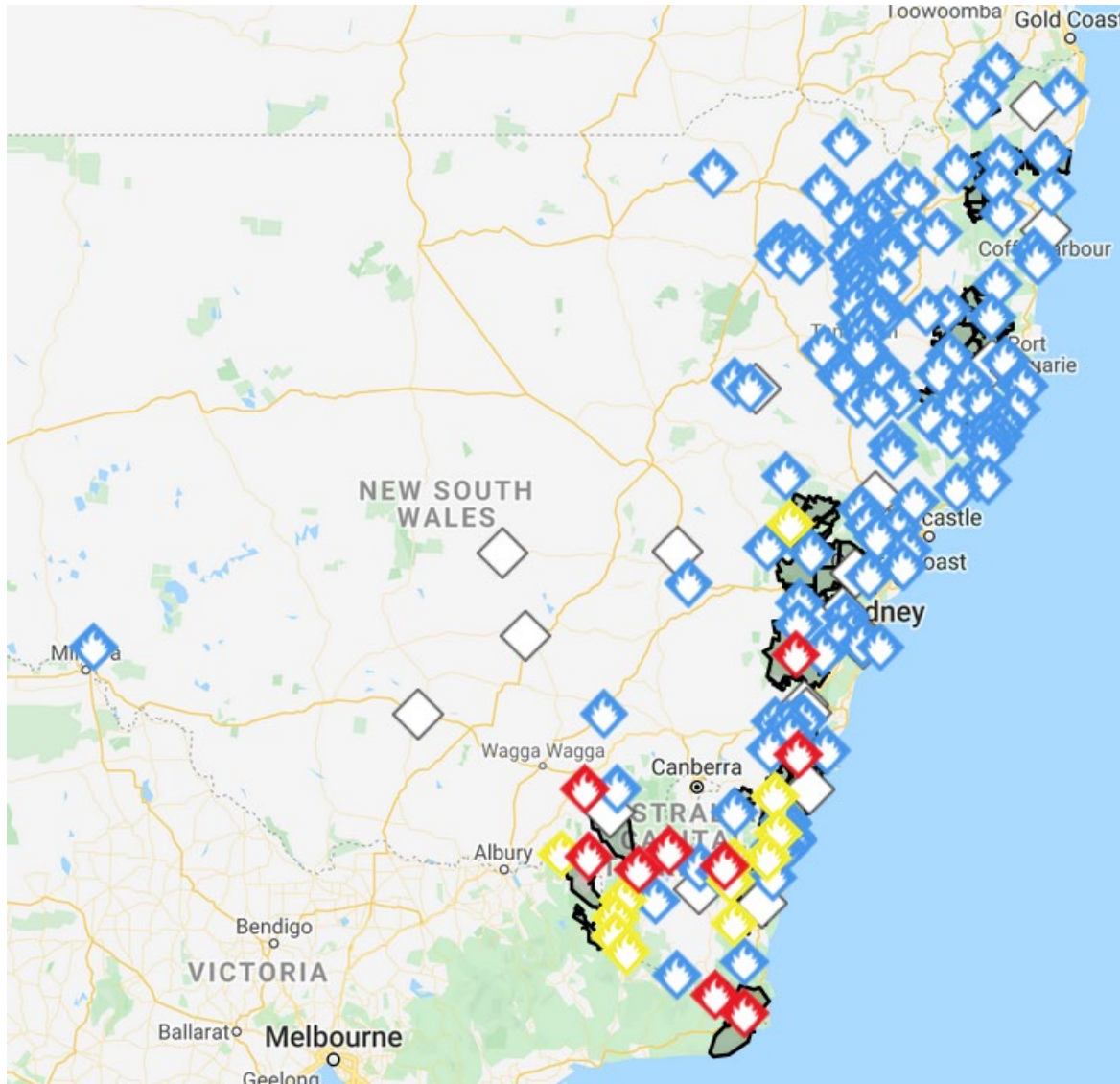
These images demonstrate the general dryness of the lawns on Central Coast in December 2019. They are representative of every lawn at that time.

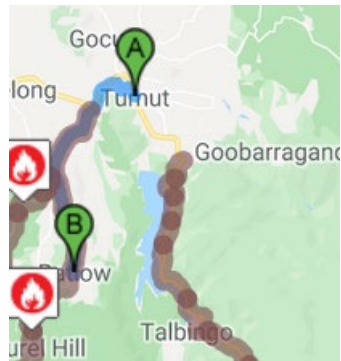


These are images of the Pine plantation burning as the Dunns Road fire approached Batlow, Snowy Valleys



This is the NSW RFS fire map January 2020 at the time Batlow burnt through on 4 January 2020. We also still had multiple fires on the Central Coast still burning

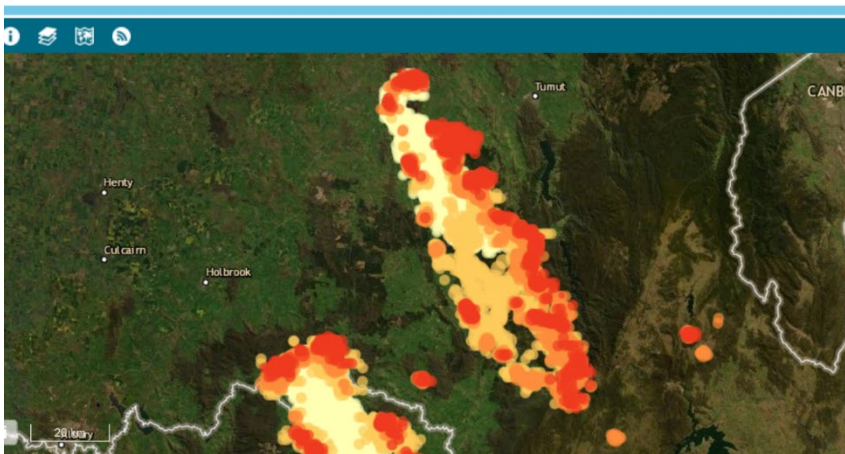




Road closures in the Snowy Valleys region leading up to January 4 2020.
The only road into and out of Batlow was closed



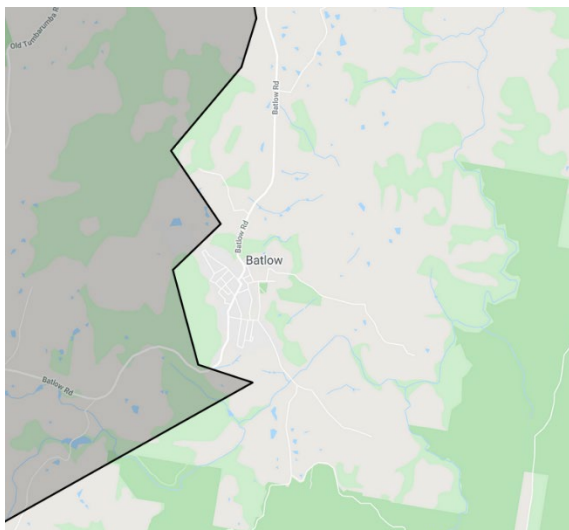
This is a house in Batlow



Map of Dunns Road fire



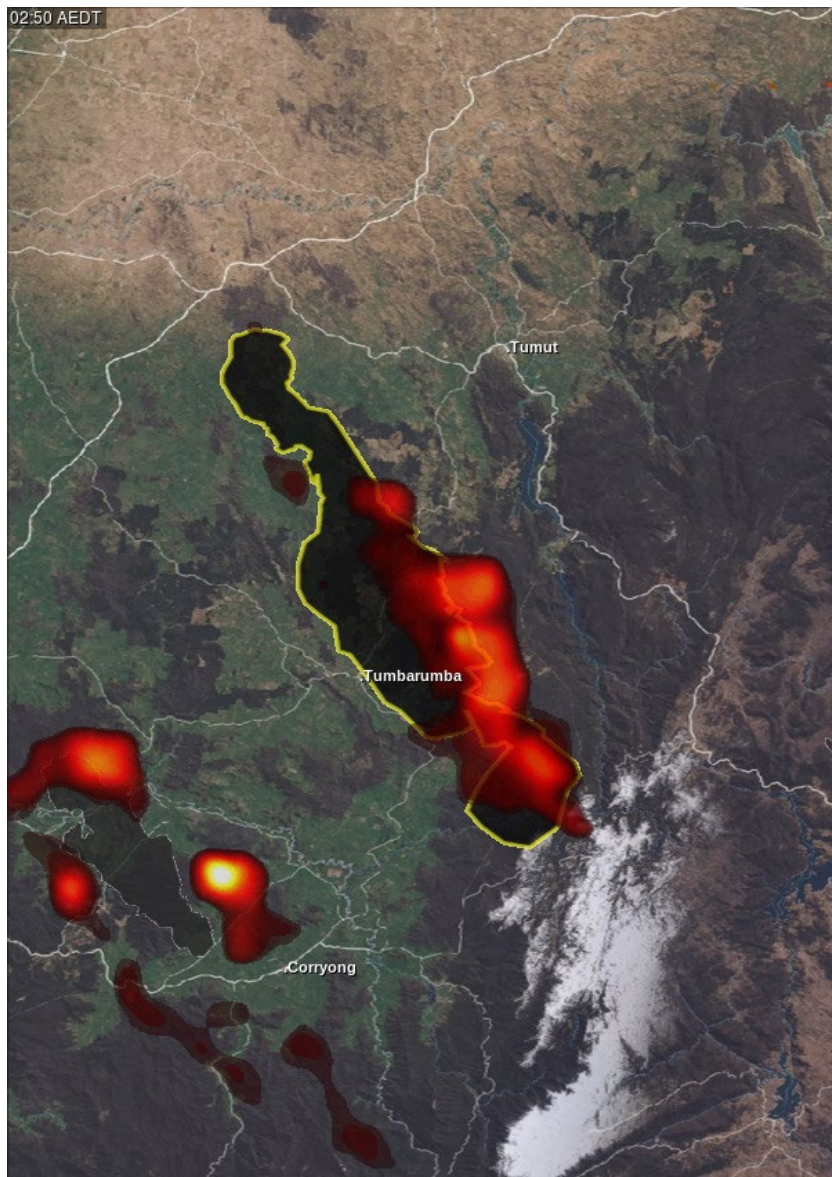
Close up of fire hotspots around Batlow leading up to the day it burnt through on 4 January 2020



The shaded area in the image on the left show the Dunns Road fire approaching Batlow. This is a zoom image of the firesnearme map. Image below is aerial shot of the same the day Batlow burnt 4 January 2020.

The shaded area in the image below, is actual land that had been burnt by the Dunns Road fire. Batlow was burnt at the time of this satellite image





Satellite image of Dunns Road firefront over Batlow- the day Batlow burnt 4 January 2020

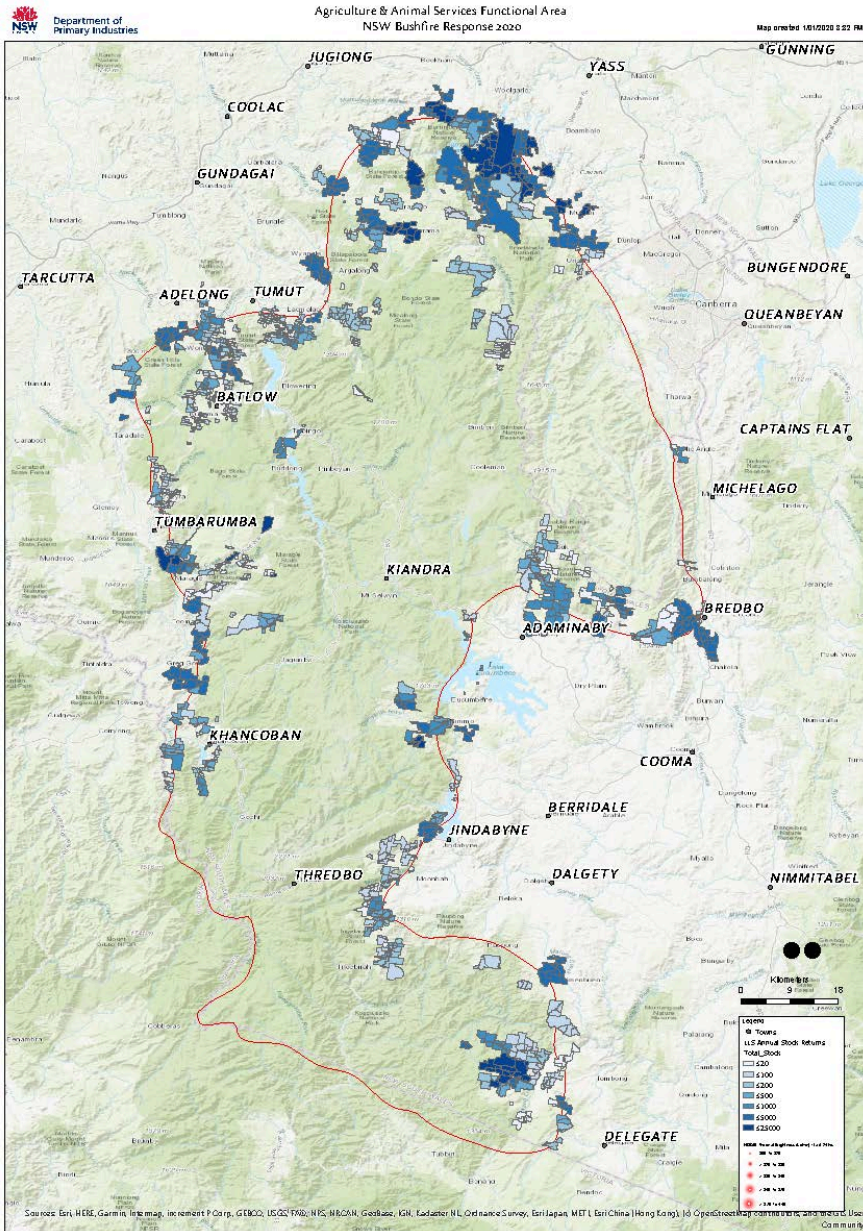
Generated Wed, 01 Jan 2020 02:50 AEDT using data from NSW RFS, NOAA, NASA, and OzForecast

These are various images taken in the Batlow & Tumbarumba regions the days and nights leading up to January 4 2020.









This is the image shared on Facebook by the Department of Primary Industries, alerting landholders to begin to make plans to prepare for the bushfire to hit their property. They were notified and given 48 hours to do what they could. This image has a key related to stock levels- the darker the colour the more stock on that area.