



Royal Commission
into National Natural
Disaster Arrangements

Submission Form

Please complete this form if you would like to provide input or comments about coordination, preparedness for, response to and recovery from the 2019-20 'Black Summer' bushfires.

Personal and Background Information

1. **Full Name** **Dr Kim Maund**
2. **Email** [REDACTED]
3. **Mobile/Telephone** [REDACTED]
4. **What is your preferred method of contact if we want to follow up with you?**

Phone or email.

5. **The Commission would like to understand the views of community groups based on their respective experiences and background.**

- a. Please select Option 1 if you are providing input and comments primarily based on your personal situation.
- b. Please select Option 2 if you are providing input and comments primarily based on your professional knowledge, qualifications or experience, or on behalf of a group or organisation

Option 1: Based on your personal situation, please complete the following.

- a. What was your personal situation in relation to the 2019-20 Bushfires? Please choose all that apply.
 - I was not living in an area affected by bushfire
 - I lived in an area affected by bushfires but was not evacuated, and didn't suffer personal or financial loss
 - I lived in an area affected by bushfires and was evacuated, but didn't suffer personal or financial loss
 - I lived in an area affected by bushfires and was evacuated, and I suffered personal or financial loss
 - I was part of the emergency response as a fire fighter on the ground
 - I was part of the emergency response as an aerial fire fighter

- I was part of the emergency response as health professional
- I was part of the emergency response as an Australian Defence Force member
- I was part of the emergency response as a Commonwealth or State government employee
- I assisted the emergency response as a community support volunteer
- I assisted the emergency recovery (i.e. after the fire event) as a community support volunteer
- Other

b. Where do you live? Please provide your Local Government Area, town name and post code.

Local Government Area	Choose an item.
Town name	Callaghan
Post code	2308

Option 2: Based on your knowledge, qualifications or experience, or your role representing a group or organisation, what is your area of expertise? Please choose all that apply.

- Emergency/disaster response and/or management
 - Environment/land management
 - Land use, planning, building standards
 - Impacts of changes in climatic conditions
 - Wildlife conservation
 - Traditional land and fire management practices of Indigenous Australians
 - Community welfare
 - Other
-

Input / Comments

6. In your experience, what areas of the bushfire emergency response worked well?

See attached letter.

7. In your experience, what areas of the bushfire emergency response didn't work well?

See attached letter.

8. In your experience, what needs to change to improve arrangements for preparation, mitigation, response and recovery coordination for national natural disaster arrangements in Australia?

See attached letter.

9. Is there anything else you would like to tell the Royal Commission?

See attached letter.

10. Do you intend to provide supporting material?

Yes

No

If you are providing any supporting material, please include it with your Submission if possible. If you need to send it separately (e.g. if you make a Submission over the phone), please ensure supporting material can be clearly identified as relating to your Submission by including your name or other identifier so that it can be considered with your Submission.

11. Do you agree to your submission being published? (Mandatory)

Yes, I agree to my submission being published in my name

Yes I agree to my submission being published anonymously

No I don't agree to my submission being published

Once you have completed this form, email it to rcnda.submissions@royalcommission.gov.au or print the form and post it to the Royal Commission at:

National Natural Disaster Royal Commission
Locked Bag 2000
Manuka ACT 2603

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AND BUILT ENVIRONMENT**



Friday 29 May 2020
Royal Commission into
National Natural Disaster Arrangements

Dear Commissioners,

Submission to Royal Commission into National Natural Disaster Arrangements

This document has been prepared to provide input into coordination, preparedness for, response to and recovery from the 2019-20 'Black Summer' bushfires. Issues relating to improving resilience and mitigating impact of natural disasters through land use planning are discussed based on recent research into decision-making in land use planning, professional experience and knowledge of disaster management policy. We thank the Royal Commission into National Natural Disaster Arrangements for their work and engagement with the broader communities.

Policy driven from national level for comprehensive bushfire risk consideration in planning

It is evident that a national bushfire policy is required to manage bushfire risk at a national level. While bushfire risk has been considered previously in land use planning policy, competing interests of need for housing, employment and economic growth, while important, have resulted in bushfire risk being considered at a later stage of the development cycle. This has resulted in strategic planning policies that identify bushfire prone land as growth areas through rezoning or increased density, with bushfire risk to be addressed at a later phase of development. In effect, this land use planning policy creates an expectation of future development on bushfire prone land prior to a full bushfire risk assessment having occurred.

Bushfire policy is currently developed at a state level and while this is appropriate for management of state, regional and local bushfire risks, a national policy would provide a consistent approach to consideration of bushfire risk in land use planning. The national policy would raise the profile of bushfire risk in land use planning at the strategic planning stage of identifying areas for growth and thereby reduce expectation that bushfire prone land is likely to be developed through identification in strategic land use planning policy documents.

Suggested approach

It is suggested that a national land use planning policy should be developed to provide for recognition of bushfire risk at a national scale that informs all strategic land use planning decisions including rezoning and increased density.

Increase spatial scale of risk consideration in land use planning decisions

Bushfire risk is mapped at a state and local level, however often considered at the development application phase for subdivision or buildings. Land use planning does not currently extensively consider broader 'community level' bushfire risk. Community level bushfire risk should be considered at the level appropriate to the community such as a suburb or region. For instance, a community surrounded by vegetation could be the appropriate scale for consideration of bushfire risk, or various areas could be delineated based on topography, vegetation mapping or overall understanding of risk.

What is important is that a much earlier and broader analysis of bushfire risk should occur than at the development application phase. Analysis of the community, bushfire risk and nature of development should occur at an increased spatial scale to allow for land use planning decisions that are informed by this broader consideration. In addition, bushfire risk should be reviewed on a regular basis for communities as the population grows over time to reflect changing nature, density and mobility of the population.

Suggested approach

It is suggested that national policy should require broad community level consideration of bushfire risk and this should include regular review of risk based on changing nature and size of the population.

Consideration of ongoing changes to demographics in bushfire risk assessment

Land use planning and consideration of bushfire risk does not currently consider demographics of the community. While some developments, such as aged care and hospitals, are recognised as requiring additional bushfire mitigation measures, demographics of a community and changes over time do not generally inform land use planning decisions.

For instance, a population with higher percentages of non-English speaking people, young children, seniors or those with reduced mobility may require additional support prior to and during a bushfire event. In addition, a community with lower socio-economic attributes than others may have more difficulty preparing for and responding to an event and may have prolonged recovery periods due to lack of resources for rebuilding.

Suggested approach

It is suggested that national bushfire policy require consideration of demographics of a community and changes over time.

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Evacuation planning at regional, suburban or community level

Access to and egress from communities is not generally considered in land use planning. Development assessment may consider access for fire-fighting and egress from a subdivision or site, however does not generally consider evacuation at a community level, such as a suburb or region. The most significant impact of evacuation routes at a community level are that if these are insufficient or lack redundancy (such as one road out of a community) then communities are likely to become isolated during a bushfire event and must find a safe refuge. Evacuation routes become more significant over time as populations grow and these routes are no longer able to accommodate traffic movement during a bushfire event.

Suggested approach

It is suggested that national bushfire policy require consideration of evacuation routes at a community level.

Spatial arrangement of cities

Detailed consideration of bushfire risk in land use planning is often at the development application phase. However, strategic planning that occurs prior to the development application phase provides a significant opportunity to arrange urban and non-urban areas with focus on location and extent of bushfire risk. For instance, it may be appropriate to develop light industrial, industrial or similar low density employment generating development closest to vegetation and subsequent bushfire risk. Government, health, education, administration, law enforcement and emergency services may be located further away from bushfire risk to allow ongoing functioning of a community and also move members of the community less able to respond to a bushfire event further from the vegetation.

Changes to spatial arrangement of communities may still result in loss of some buildings (such as light industrial and industrial), however essential services and other land uses may be more likely to not be impacted thereby allowing for more rapid recovery from the event. While each community should have input into spatial arrangement and separation from bushfire risk, national policy should provide guidance on how communities should be arranged to reduce bushfire risk.

Suggested approach

It is suggested that national bushfire policy require consideration of spatial arrangement of communities and allow for land uses that should be separated from that risk.

Preparing community spaces as disaster refuge

Public open space provides multiple land uses including recreation, environmental enhancement and water management. Most communities have parks, ovals, sporting fields and similar spaces used for recreation by communities; however, these areas of land also provide opportunity to act as a refuge during bushfire events. Modifications may occur that provide improved temporary refuge facilities such as storage areas for beds, blankets and cooking equipment as well as opportunity for additional lighting, power and temporary ablutions to be installed.

Suggested approach

It is suggested that national bushfire policy require consideration of open spaces as refuge areas with ability to be modified during bushfire events.

A multi-criteria framework for making land use planning decisions

Land use planning policy does not currently provide a consistent land use planning decision-making framework when identifying land for rezoning or increased density that considers bushfire or other natural hazard risks. Land use planning decisions are often based on existing policy, including legislation, strategic planning documents, policies and guidelines. However, there is no consistent decision-making framework that outlines how bushfire risk and risk of other natural hazards, should be considered in strategic land use planning. Lack of a consistent decision-making framework may result in inconstant decisions that focus on other issues such as housing affordability, employment and economic growth without appropriate consideration of bushfire risk. Furthermore, a national decision-making framework would allow for review of decisions in a consistent manner and an accepted process to update land use planning documents as new information is identified or populations grow and change over time.

It is important the proposed decision-making framework considers multiple criteria in making land use planning decisions, including environmental protection, location of existing buildings and infrastructure, existing transport networks, competing land uses such as need for farming land, essential services and housing as well as contemporary information on risk of natural hazards.

Suggested approach

It is suggested that national bushfire policy assist with creation of a consistent multi-criteria decision-making framework.

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Improving quality and communication of hazard information for making land use decisions

A national agency should assist with minimum standards of mapping and reporting on bushfire risk. While this information is likely to be managed at the state level, national policy should inform how this information is gathered, managed and presented. Communities and experts need quality contemporary information on land use planning including population projections, spatial mapping and risk of natural hazards to make informed decisions.

Suggested approach

It is suggested that national bushfire policy assist with establishing minimum information requirements and mapping for bushfire risk.

Collaboration in land use planning decision-making

Finally, as with most decisions, land use planning decisions should be made through collaborative decision-making. There are existing referral triggers in relation to consideration of natural hazards embedded in land use planning; however, an ongoing collaborative process should be established in terms of engaging with relevant stakeholders in making land use planning decisions guided by a national policy framework. This requires both cultural and process change in terms of decision-making. Communities, researchers, bushfire experts, land use planners, environmental scientists, essential services and government agencies should work collaboratively on broad community level land use planning decisions. This collaboration may occur through meetings that focus on multiple land use planning decision-making criteria based around national policy or alternate mechanisms.

Suggested approach

It is suggested that national bushfire policy encourage collaborative decision-making.

Again, we thank the Royal Commission into National Natural Disaster Arrangements for the opportunity to provide a submission. The researchers welcome any opportunity to contribute further to the Commission to provide safe and resilient communities.

Regards,

Dr Mark Maund – SABE Research Affiliate

Dr Kim Maund – SABE Discipline Head Construction Management

A/Professor Thayaparan Gajendran – SABE D/Head of School

Professor SueAnne Ware – SABE Head of School

