

# Fire authorities and planners: reducing risk across diverse landscapes

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## Abstract

*Bushfire risk mitigation measures have become increasingly integrated into the responsibilities held by planning professionals, and this is indicative of a broader trend of emergency management responsibilities being formally adopted by other sectors. This paper considers how the integration of bushfire risk into urban and regional planning is being grappled with across four landscapes and jurisdictions in Australia. The paper draws on four focus groups held between fire authorities and planners in the Australian Capital Territory, Victoria, New South Wales and the Northern Territory. The research reveals the common challenges of this work, and instances where innovation is occurring between fire authorities and planners. However, it remains that there is no straightforward 'planning solution' for reducing bushfire risk.*

## Introduction

Fire authorities, planners, forestry officials and formal bushfire inquiries all identify land use planning as both cause of, and solution to, bushfire risk (Bosomworth 2011, p.144; Ellis et al. 2004, p.79; Bihari et al. 2012, p.4). However, properties continue to be built in high bushfire risk locations (Hughes and Mercer 2009, p.126; Buxton et al. 2011, p.7; Stephens and Collins 2007, p.34). The risk mitigation priorities of fire authorities are frustrated by planning decisions that increase bushfire risk, and thus also increase the likelihood of an emergency event requiring their response. Whilst 'shared responsibility' for bushfire risk across sectors and between citizens and governments is the new policy rhetoric (McLennan and Handmer 2013), the emergency management authorities are the ones who are interrogated by the public, the media, the judiciary and others in the cycles of blame and inquiry that follow large bushfires (Ellis et al. 2004).

On the other hand, planners must consider bushfire risk in relation to prioritising and regulating a diversity of economic, social and environmental priorities, including transport, housing availability and affordability, infrastructure, amenity, sustainability, community services and cohesion. Planners receive pressure from politicians, developers, landowners and others to make inclusions or exclusions to plans and planning regulations (Bihari et al. 2012, p.4). Local councils are influenced by the income they receive from development to maximise the number of homes sited in a subdivision, thereby leaving less room for bushfire

risk reduction measures. When enforcing bushfire risk regulations, planners must consider how they might be challenged in court by property owners, with consideration given to the common law tradition of protecting individual property rights and freedoms (Hughes and Mercer 2009, pp.125-6; Kelly 2010, p.49).

Many planning decisions do place fire authorities and planners at odds, however it is also true that they are strategizing on innovative solutions. Indeed, fire authorities are employing planners in house, and planning authorities are employing staff with fire expertise. This was reflected in the career paths of some of the research participants in this study, who had transferred from local government positions to the fire authorities, and vice versa. This integration of bushfire risk reflects the heightened priority it is receiving in policy, as well as the emergency management trend to broaden its activities out from just the risk event (Handmer and Dovers 2013, p.12).

## Methodology

This paper draws on focus group research that was conducted between August and December 2012 by the University of Canberra, as part of a larger project on “Mainstreaming Fire and Emergency Management across Legal and Policy Sectors”, for the Bushfire Cooperative Research Centre. Four focus groups were convened with public officials to talk about different aspects of the integration of bushfire risk into planning. The aim was to explore the challenges and opportunities of their work across four different jurisdictional and landscape contexts.

Focus groups are a qualitative research methodology that brings together a group of people to discuss a topic for one or two hours, usually in a semi-structured facilitated format with set questions as a starting point. Focus groups enable:

- In-depth group discussion between participants who have either a shared concern, or a shared experience;
- Facilitated discussion on a topic with one or more moderators; and,
- Interaction between participants to explore and clarify points of view between each other (Liamputtong 2011, p.5).

This group discussion takes the focus away from the researcher. In the intra-group interaction, ‘accounts are articulated, censured, opposed, and changed through [the] social interaction’, reflecting ‘peer communication and group norms’ (Kitzinger 2005, p.58). However, the group setting can also mean that some participants may dominate, that others may conform, and that personal information is not revealed (Liamputtong 2011, p.8).

For this project, the main focus group participants were the fire authorities and planners from local and regional organisations, however also represented were foresters, a weeds manager, parks, and occasionally officials involved in climate change, sustainability and economic development at the state/territory level. Public officials were selected for both their expertise and their professional role, and individuals were identified through advice given by industry partners at each location (listed below), as well as consultation with the local municipal authorities. The focus groups were limited to fourteen participants. To manage the research scope, elected officials, the community and the private sector were excluded.

Each focus group was situated in a different jurisdictional and landscape context:

- The first focus group was held in the Australian Capital Territory (ACT) in partnership with the ACT Rural Fire Service, and considered the new residential subdivision of Molonglo. Molonglo is on the bushfire prone western edge of Canberra, adjacent to national parks and mountains.
- The second focus group was held in the Northern Territory (NT) in partnership with Bushfires NT and considered the issues facing the Litchfield Shire Council area which includes the growing complexity of peri-urban Darwin. Marked wet and dry seasons facilitate annual fuel growth on the monsoonal savannah woodlands, as well as water logged lands.
- The third focus group was held in New South Wales (NSW) in partnership with the NSW Rural Fire Service, and considered the two neighbouring shires of Shoalhaven and Eurobodalla. This is a mountainous coastal area in southern NSW, with steep forested slopes leading to flat coastal floodplains.
- The fourth focus group was held on the Mornington Peninsula, Victoria, in partnership with the Victorian Country Fire Authority. This narrow coastal peninsula on the edge of Melbourne has a complex urban-bush landscape with coastal towns and rural land use.

The four focus group locations provided a diversity of bushfire risk experiences and regulatory schemes, and the opportunity to compare experiences between northern and south eastern Australia. South eastern Australia has the higher bushfire risk with more intense bushfires and a more complex urban-bush interface, whereas in the Northern Territory bushfire risk is increasing in part from African fire weeds and growing land use complexity. The ACT, NSW and Victoria all have detailed regulatory schemes for bushfire risk and planning, with accompanying guides for community and government use (NSWRFSF 2006; ACT Government 2009a; ACT Government 2009b; ACT Government 2009c; CFA 2012). The Northern Territory has a less prescriptive bushfire and planning risk scheme, with legislative provisions and a short guide on landholder responsibilities (CFA 2013), but no comprehensive law, policy or other direction on the integration of bushfire risk and planning.

In each of these four locations the focus group participants were asked the same six questions about integrating bushfire risk into urban and regional planning, and these were: what are we doing well; what are we not doing well; why – what are the barriers to doing better; is integrating bushfire risk into urban and regional planning important; what is the influence of climate change on this work; and, what are your priorities for this research project? Participants made their contributions anonymously, albeit in front of their colleagues.

Planning was described to the focus group participants as 'urban and regional planning' and as including 'land use planning' in relation to bushfire risk. This encompasses diverse planning methods, from strategic planning which sets the planning agenda; statutory planning which creates the structures for practice; and management practice which interprets and implements the planning regulations. Discussion in the focus groups usually kept to these planning topics, however the discussion would flow into other related issues, and planning was interpreted more broadly by some public officials who were not planning professionals.



## Focus Group Results

The results from the focus groups were summarised under each question and then compared and analysed across the four jurisdictions to draw out the key issues and themes. The results are grouped under three interrelated themes: biosocial risk context; governance; and, management. For the purposes of this paper the most salient results from each of these themes will be summarised.

It is worth noting that each focus group had its own distinct dynamic. For example, in Litchfield Shire Council, the discussion was very energetic and participants expressed the value of taking time out to meet with each other. Whereas in the ACT, the participants had already met over 100 times to discuss planning for Molonglo, although afterwards many participants commented that it was cathartic to talk more broadly and without having an agenda to push. In all focus groups bushfire risk was acknowledged as a very serious matter. It was the question of how to manage this risk in urban and regional planning, particularly the effectiveness of the methods employed and the pressure of other objectives, that revealed the complexity of the issues faced across different participant experiences.

### ***Biosocial risk context***

A dominant theme across the focus groups was the prevalence of different perceptions of risk held, and how this fundamentally affected the work of the agencies. For example:

*Our first challenge that we've had is just simply saying, "Bushfire is a constraint on land use planning." If you don't buy into that, you're not going to buy into any of the responses. ... [It's been] a massive step change in the last two or three years.*

Focus Group Participant, Mornington Peninsula, 14 December 2012

*Planning for a long time has said 'you don't build on flood affected land'.... Whereas [with] bushfires, we haven't got that same mentality or view in the community. With bushfires, we are expected to prevent the risk or manage the risk.*

Focus Group Participant, Shoalhaven-Eurobodalla, 8 November 2012

*There are risks not just in terms of the physical fire exposure, it's the ecological values that are present.*

Focus Group Participant, Molonglo, 16 August 2012

*Our level of concern about the risk isn't keeping pace with the changes in that population and the way that area is being developed.*

Focus Group Participant, Litchfield Shire Council, 19 October 2012

In each risk and regulatory context, participants grappled with this fundamental issue of how to live with and value bushfire risk, and regularly brought the wider societal and environmental context into the discussion. Planners often played a pro-active role in this, bringing in other risks or priorities that they are required to consider. For example, in the Litchfield Shire Council focus group, the fire authorities discussed the bushfire risk consequences of new urban growth settlements being placed in previously semi-rural areas. This urban growth challenge to emergency service practice is occurring at the same time as

bushfire intensity is increasing from weeds such as gamba grass. However, towards the end of this discussion one of the planners explained how the urban design was intended to reduce fresh water consumption so as to protect the underground aquifer which is at risk of saltwater intrusion, even more so with sea level rise. The planner was establishing the importance and validity of their decision making process, even though one of the consequences has been a more complex bushfire risk mitigation landscape.

## **Governance**

Governance concerns, including law, policy and regulation, formed the bulk of the participant responses. Participants in the Litchfield Shire Council focus group appreciated the flexibility of their less prescribed regulatory scheme, whilst focus group participants from south eastern Australia appreciated the guidance of their policy and other documents. In describing their governance roles, the planners and fire authorities revealed how they were strategizing to find solutions for integrating planning objectives with bushfire risk, including: the strategic location of settlement and subdivisions, access roads, space for additional asset protection, formal zoning for asset protection activities, site specific requirements for houses, and community engagement.

In the Shoalhaven-Eurobodalla focus group, both the planners and the fire authorities noted that developers who had allowed for land for riparian zones and threatened species legislation, but did not also consider bushfire risk, were caught out when asset protection zones required fuel reduction on these ecologically sensitive lands, thereby undermining the development application as a whole. One planner blamed the bushfire legislation for this problem, but was corrected by others who identified the problem as the failure to include bushfire risk at an earlier stage of development.

Including bushfire risk at an earlier stage of development is happening on the Mornington Peninsula, where addressing bushfire risk in bushfire prone areas is now a mandatory part of planning:

*In the past, fire was too hard, conservation was too hard in terms of trying to balance the two out. But, now, because it's become quite pointed, there's a much better understanding of each department within council's role of how they plan that space between balancing bushfire and conservation and trying to come to practical solutions.*

Mornington Peninsula, Focus Group participant, 14 December 2012

For example, synergies are being found with respect to the siting of buildings on large properties:

*More often than not, there's actually an alignment between bushfire and conservation. ... The most appropriate location [of the house] for bushfire [risk] is the most appropriate location from an ecological point of view as well because it's usually the most disturbed part of the site.*

Mornington Peninsula, Focus Group participant, 14 December 2012

The focus group participants also identified slashing weed growth as an important activity with win-win outcomes for both ecological and bushfire risk objectives.

In Shoalhaven-Eurobodalla, the participants discussed the role of strategic planning in better addressing bushfire risk and environmental objectives. Instead of incrementally spreading into areas of high environmental value and increased bushfire risk, and thereby compromising both, some planners argued for “sacrificing” one area for development and then “offsetting” this with another area for conservation, as is possible under New South Wales planning instruments. However, participants then raised the difficulty of choosing whose land gains the development windfall, and whether it is okay to offset development on private land with conservation on public lands? The planners did report on an example where they researched and worked through these issues so as to take such a strategic approach, but it was rejected by the council reluctant to reserve any land from development.

In Molonglo, the ACT government is the sole land holder and focus group participants reported that this has made it easier to integrate and coordinate across issues. Focus group participants presented on how they had comprehensively mapped and formalised bushfire risk and ecological values, and consulted with stakeholders, to make careful planning decisions. Even so, one participant noted that the amendments had reduced Molonglo to two-thirds of its original size and with a lengthier perimeter. Amendments to the original design were necessary because it had a poor understanding of the approach of Federal and Territory environmental protection laws (pers. comm. Andrew Mackenzie). Further, the focus group discussed how detailed environmental research about the site, conducted after the strategic planning process, reduced the design options. In this instance, the planners’ responsibility to balance multiple values and regulatory schemes led to a decrease in housing availability and an increase in exposure to bushfire risk. Other planning contributions, such as the provision of water storage ponds along the river corridor, were mentioned as design elements that addressed some of the bushfire risk as well as matching with environmental priorities.

## ***Management***

Specific management treatments were usually brought up by focus group participants in the context of governance issues, with discussion held on logistical difficulties, the effectiveness of certain methods, funding issues, and the role of new information and technologies. The fire authorities from the Litchfield Shire Council focus group suggested planning could assist with the inclusion of better access for bushfire risk mitigation activities in subdivision design. They also discussed how access to water logged areas could be improved by building rock roads, or purchasing mulchers on skid steers, although both are expensive measures. A planner from the Shoalhaven-Eurobodalla focus group identified financial constraints as challenging the application of bushfire regulations not originally considered as part of a subdivision. They discussed a subdivision approved in the 1990s which made allowances to protect riparian vegetation, but the land for housing is now mapped as an asset protection zone. The blocks of land are currently for sale for \$120,000, and the planners have been advised that an extra \$80,000 in building costs is required for bushfire risk treatments to comply with the guidelines (NSWRFS 2006).

There was a lot of discussion in all the focus groups about the use of new technologies and information, such as mapping methods, aerial photographs, research, and more in-house agency expertise. There was also a strong demand for much more information. A Molonglo focus group participant requested that a GIS scenario plan was needed as a decision support tool that balanced the trade-offs and objectives of land management with socio-economic priorities. This was countered by another focus group participant who noted that there are important value judgements in such decisions that cannot be modelled.

## **Planning as ‘solution’ for bushfire risk**

The experiences raised by the Mornington Peninsula focus group participants provide a unique insight to the potential of planning as ‘solution’ for bushfire risk. Land use planning was a central focus of the Victorian Bushfire Royal Commission (Teague et al. 2010), and the principal of the ‘primacy of life’ in strategic measures as well as mandatory provisions now ensure planners address bushfire risk. The focus group participants discussed how their systematic engagement with planning has been very productive, but, the participants also very clearly reported that planning regulations can only do so much:

*We’re using planning to fix the problem, rather than saying, ‘Let’s address the hazard.’ And then when we want to develop, planning will make sure development is appropriate. We’re not addressing the hazard until a planning application has come in.*

Mornington Peninsula, Focus Group participant, 14 December 2012

There are reforms across the planning spectrum, but it many of the focus group participants were responsible for addressing the mandatory provisions for development applications and subdivisions. As stated above, this has produced results, however for these participants it has also concentrated bushfire risk mitigation to just one point in time and on one place on the map. The focus group participants reported there were key constraints with this standard – it is largely blind to ongoing compliance, to the activities of neighbouring landholders, and to the legacy of previous planning decisions. In addition, the participants reported that the importance of these mandatory provisions has led to some expectations in the community that bushfire risk was being adequately addressed. However, they emphasised that there were still many other matters that needed addressing across society as part of shared responsibility for bushfire risk, as well as the continuing uncertainty and dynamism of bushfire risk.

The focus group results revealed that expecting planning to be a straightforward technical managerial solution to ‘self-evident’ problems, such as bushfire risk, is unrealistic (Gleeson 2012). Planning is a professional expertise, but it is one that is steeped in the influence of socio-cultural values and norms, power structures, and their interplay with the landscape. The potential of bushfire aware planning fundamentally rests on how risk is perceived and prioritised in society, including the influence of dynamic factors such as climate change, seasonal change, and destructive bushfire events. The focus groups revealed that rather than planners and the fire authorities being at odds over bushfire risk, they are both grappling with responsibly addressing a risk whose sway and effects extends far beyond their job description.

## Acknowledgements

I thank the focus group partners for their invaluable assistance with organising the focus groups, as well as for their contributions as focus group participants: the ACT Rural Fire Service, Bushfires NT, the NSW Rural Fire Service and the Victorian Country Fire Authority. I thank all the focus group participants for the time they gave to this research project, in many cases travelling substantial distances to attend. I also thank Barbara Norman for chairing the focus groups, and Lyndsey Wright for her support with documenting the focus group responses. All errors or omissions remain my responsibility. This research was funded by the Bushfire Cooperative Research Centre.

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