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**Response to draft report – Productivity Commission Inquiry into Natural Disaster Funding Arrangements**

This response to the draft report reflects the views of Max Margetts in his capacity as an urban designer with extensive experience in land capability assessment and land use evaluation, but also as a private citizen with an informed interest in bushfire risk mitigation at the urban/bushland interface.

The earlier Productivity Commission Issues Paper summarised the Terms of Reference as follows:

*“The Commission has been asked to develop findings on the following:*

- *the sustainability and effectiveness of current arrangements for funding natural disaster mitigation, resilience and recovery initiatives*
- *the risk management measures available to and being taken by asset owners*
- *the interaction between natural disaster funding and federal financial arrangements*
- *options to achieve an effective and sustainable balance of expenditure on natural disaster mitigation and recovery*
- *how stakeholders can most effectively fund natural disaster recovery and mitigation initiatives*
- *how to ensure the right incentives are in place to support cost-effective decision making*
- *mechanisms and models to prioritise and evaluate mitigation opportunities*

- *the role of urban planning, land-use policy and infrastructure investment in supporting cost-effective risk management*
- *options to fund identified natural disaster recovery and mitigation needs.”*

My submission addresses the second last, but arguably most important of these issues and responds to bushfire risk mitigation aspects of Section 7 of the Draft Productivity Commission Report – “Managing natural disaster risk to the built environment.”

My specific interest is in relation to bushfire risk mitigation in established communities at the urban/bushland interface.

## **Comments**

To provide some context for my comments on the Draft Report of the Productivity Commission I consulted the National Strategy for Disaster Resilience (NSDR) which was released by the Council of Australian Governments in February 2011.

As a resident of a recently fire affected community I took great heart from the NSDR’s recommended rebalancing of responsibilities and resources towards a model with “shared responsibilities”, as advocated in the Victorian Bushfires Royal Commission and subsequent bushfire disaster enquiries such as the Perth Hills Bushfires Inquiry of 2011.

Of specific relevance to the Natural Disaster Funding Inquiry, Section 1 of the NSDR advocated the following:

*“To increase disaster resilience, emergency management planning should be based on risk and be integrated with strategic planning of government and communities. It should consider risks and risk treatments across the social, built, economic and natural environments.”*

In this context the implementation of the NSDR through subsequent initiatives such as the Productivity Commission Inquiry into Natural Disaster Funding needs to take a wider view of the scope for risk mitigation in critical land management aspects of land use planning to build greater resilience to bushfires in established communities.

In many areas of southern Australia, suburban or peri-urban housing has existed for 50 to 150 years near remnant bushland or has been surrounded by orchards and ornamental gardens of low flammability. It is inarguable that the risk profile of many of these areas has risen to unsustainable levels in recent decades through a combination of landscape neglect, environmental naivety and the implementation of misguided native revegetation policies.

Experts that I trust tell me that this aspect of land management far outweighs the impact of climate change as a risk factor.

By default and deliberate intervention, the native forest canopy and much of the volatile native vegetation understorey has re-established amongst houses and in the adjacent

bushland at a density and with a level of accumulated ground fuels that was never seen in 40,000 years of Aboriginal fire-stick land management.

If anyone is any doubt as to the real cause of the increasing incidence of catastrophic bushfires in southern Australia they should read and comprehend the work of Bill Gammage in his highly acclaimed book, "The Biggest Estate on Earth", where the author systematically lays out the historical record of Aboriginal landscape management.

On the inside cover to Gammage's book, we read that,

*"Across Australia, early Europeans commented again and again that the land looked like a park. With extensive grassy patches and pathways, open woodlands and abundant wildlife, it evoked a country estate in England. Bill Gammage has discovered this was because Aboriginal people managed the land in a far more systematic and scientific fashion than we ever realised.....Once Aboriginal people were no longer able to tend their country, it became overgrown and vulnerable to the hugely damaging bushfires we now experience."*

In the Western Australian context, former CALM researcher and landscape ecologist Dr David Ward spent decades investigating Aboriginal burning practices and concluded that the Jarrah/Marri forests which once covered much of South Western Australia were systematically burnt in a patchwork fashion by Aborigines at 3-4 year intervals to maintain safety, ready access to food and ecological diversity.

Aborigines across mainland Australia and Tasmania used mosaic burning at regular intervals to keep the bush open and less threatening. They had no access to helicopters, water bombers or even fire hoses and they had no need for bushfire compensation.

Of course we need to use land use planning and relevant building standards in a contemporary context to limit the exposure and vulnerability of people and property to unwarranted risk of bushfires in new residential subdivisions. But taking such a precautionary approach in the development of new residential areas should not blind us to dealing with the 'elephant in the room' issue when it comes to the nature of the bushfire hazard in long established residential areas at the urban/bushland interface.

Rather than unrealistically assuming that existing houses in bushfire prone areas will either be "hardened" to resist the ravages of bushfires or "relocated" out of such areas, we need to accept that in many instances the most socially and economically rational approach would be to better manage the hazard by:

- adequately funding effective mosaic hazard reduction burns in adjoining bushland and the forest estate beyond
- thinning out fire-prone trees and fire-prone vegetation in more closely settled areas to create viable strategic fire breaks (100+ metres), Building Protection Zones (20+ metres) and Hazard Separation Zones (100+ metres). This would allow long established housing to more readily comply with the intent of Australian Standard for "Construction of Buildings in Bushfire-Prone Areas"

(AS3959-09). This measure alone would have prevented more than 85% of the house losses to bushfires in Australia, according to the findings of Risk Frontiers research undertaken for the VBRC.

- amending AS3959-09 where relevant to more explicitly acknowledge that Firewise vegetation results in a lower Bushfire Attack Level (BAL) and therefore a lower risk. This fact has been demonstrated over and over in bushfire history, including during the 2009 Victorian Bushfires. Intelligent landscape design could be the most cost effective way to mitigate bushfire risk in settled peri-urban landscapes across much of southern Australia.
- modifying the landscapes around houses and in adjoining streets and reserves so that they are predominantly comprised of Firewise species, as generally recommended and illustrated in the Victorian CFA's 2012 "Landscaping for Bushfires" document. Local Government could assist by planting Firewise street tree species as part of an integrated bushfire resilience programme.
- leaving fire-dependant bush landscapes and inherently flammable native vegetation in the bush and separate from where we live at the urban/bushland interface. The romantic notion of having a "home amongst the gum trees" is an unsustainable folly in a fire dependant landscape.

Where warranted, bushfire risk mitigation funding could be strategically deployed to fund the establishment of offset native revegetation in areas well away from established housing precincts (ie beyond the 100+ metre Hazard Separation Zone).

This aspect of land use planning and management will only be accomplished if all tiers of government and individual property owners accept reality and share the responsibility for active and ongoing landscape management to minimise risk.

Quite rightly, the ongoing responsibility for risk reduction through active landscape management of property (whether public or private) should mostly be carried by property owners. But bushfire risk reduction in closely settled areas can only work if properties are managed for hazard on a collective basis.

Once the hazard is reduced and established housing areas are made more defensible, there is more likelihood that property owners will invest in building improvements to "harden" houses rather than placing a false reliance on costly outside fire suppression and insurance.

Where it is realistically safe to do so, "Bushfire Ready" groups and capable property owners should be trained and encouraged to actively defend properties, with relevant insurance and tax rebates for purchases of fire fighting equipment.

A sober analysis of the data from the 2009 Victorian bushfires by noted commentator Joan Webster demonstrated that even under the worst of circumstances most houses, with adequate planning and preparation can be successfully defended from bushfire attack. Governments, fire agencies and the media grossly under-estimate the ongoing social and psychological impact of losing houses to fire that might otherwise have been readily defended if residents had not been compulsorily evacuated. In this context one of the worst things we can do in the face of most bushfires is to leave homes

undefended. Under such circumstances a high proportion of houses, including many of those built to AS3959-09 construction standards, will ultimately burn down through ember infiltration and spot fires.

We need to heed the advice of long standing expert commentators on bushfire risk mitigation and re-focus on: adequately managing the hazard; retrofitting landscapes and houses at the settled peri-urban interface; and preparing to defend properties in a sustainable and cost effective manner to reduce the economic and social cost of bushfire disasters across Australia.

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Max Margetts