

# OPENING

## LAND USE PLANNING AND THE BUILT ENVIRONMENT

Andrew Tokley QC

Wednesday, 8 July 2020

1. Commissioners today we will be exploring the topic of land use planning and the built environment, which is addressed in Terms of Reference (f)(iii).
2. We will be exploring this topic through the lens of Terms of Reference (b). In particular:
  1. How land use planning and the built environment can improve resilience and adaptation to changing climatic conditions to mitigate the impacts of natural disasters; and
  2. Whether accountability for natural disaster risk management should be enhanced.
3. The focus of the evidence today will be the extent to which natural hazard risk is incorporated into decisions about where people live, how land is used and the types of buildings that are constructed.
4. The topic of land use planning and the built environment is broader than the focus of today's hearing. In this regard, the Commission has been assisted by the Responses to Notices issued to States, Territories and Local Governments, submissions from the public and reports of previous inquiries.

### Previous evidence

5. Commissioners, on Day One of Hearing Block One, you heard from the CSIRO that "*climate change means that the past is no longer a guide to future climate related impacts and risks*".<sup>1</sup> You also heard from the Bureau of Meteorology that climate trends "*probably load the dice towards worse fire seasons in general*"<sup>2</sup> and that the 2019-2020 bushfire season is unlikely to be a "*one-off event*".<sup>3</sup>
6. [CSI.505.001.0001 at 14] – This document shows that the scientific evidence concludes that we can expect hotter temperatures; more heatwaves and marine heatwaves; increased and extreme fire weather in southern and eastern Australia; a lower cool season rainfall in eastern and southern Australia and increased drought; more intense hourly to daily rainfall extremes; fewer but more intense tropical cyclones; and higher sea levels and more extreme sea level events with reduced time between such extreme sea level events.
7. You have heard evidence of the impacts of the 2019-2020 bushfires.
8. On Day One of Hearing Block One, the Organisational Risk Frontiers emphasised the importance of land planning; noting that 38% of the homes destroyed in the bushfires on the New South Wales South Coast, were within one metre of bushland and 80% were within 100 metres of bushland.<sup>4</sup> You also

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<sup>1</sup> Hearing Block 1, Day 1, Transcript Page 28, Lines 7-8

<sup>2</sup> Hearing Block 1, Day 1, Transcript Page 21, Lines 19-20

<sup>3</sup> Hearing Block 1, Day 1, Transcript Page 15, Lines 19-30

<sup>4</sup> Hearing Block 1, Day 1, Transcript Page 62, Lines 35-42

heard evidence, from Risk Frontiers and IAG, that it is possible to identify what areas of Australia are at most risk of financial and economic loss as a result of natural hazards.<sup>5</sup>

9. In the first week of Hearing Block Two, hazard reduction activities were considered; activities that reduce the severity, intensity and frequency of a natural hazard. By way of example, the hearings focussed on bushfires and fuel load management. However, natural hazards on their own do not lead to a natural disaster. A natural disaster will occur when a natural hazard affects something of value to the community, whether it is human life, wildlife, businesses, homes and items of cultural and environmental significance.
10. Risk from a natural hazard can be understood as a combination of three factors.
  - First, the **natural hazard** itself; that is, the severity, intensity and frequency of the hazard.
  - Second, **exposure**; that is the elements that are at risk (people, buildings, infrastructure, agriculture etc.)
  - Third, **vulnerability**; that is how each exposed element responds to the level of hazard.<sup>6</sup>
11. Reducing risk from a natural hazard can only be achieved by decreasing the contribution from one or more of these three factors.
12. Land use planning and building regulation are mechanisms for managing **exposure** and **vulnerability** to natural disaster risk. Land use planning governs **where** built assets, and the people that live in and use them, can be located. Land use planning is an important influence on **exposure** of communities to natural hazards. Building regulations determine **how** built assets can be constructed and so affects the **vulnerability** of communities to natural disasters.
13. By setting rules about where development can occur and what types of built assets can be constructed, governments influence both the **exposure** and **vulnerability** of communities to natural hazards over long time periods. Land use planning and building decisions have far reaching and long lasting consequences as to how exposed and vulnerable the community will be to future natural hazards. Where land use policy and decision making or building regulations do not effectively incorporate natural disaster risk, future costs of natural disasters can be higher.<sup>7</sup>
14. Land use policy and decision making and building regulations apply only to new properties and new developments (or significant modification to existing properties). They do not apply to existing properties and existing developments. This is often referred to as the **“legacy risk”**. For example, assets built to comply with building regulations that are now out of date, in areas that may now be at a higher risk of natural disaster than at the time assets were built.
15. The organisation XDI will be giving evidence today and it estimates that over 380,000 properties are currently exposed to what they term high natural hazard risk.<sup>8</sup> The Bushfire Building Council, who will also be giving evidence today, estimate that *“90% of buildings in bushfire prone areas in Australia have not been built to bushfire planning and construction regulations because they were built prior to*

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<sup>5</sup> Hearing Block 1, Day 1, Transcript Page 64 Line 40 – Transcript Page 66 Lines 1-25; Witness Statement of Dr Ryan Crompton of Risk Frontiers dated 22 May 2020 (RYC.500.001.0001); Witness Statement of Mark Lepastrier of IAG Limited dated 22 May 2020 (IAG.001.001.0046)

<sup>6</sup> Geoscience Australia, Response to NTG-HB-1-319 dated 28 May 2020 at [30] to [36] (GEO.502.001.0002)

<sup>7</sup> Productivity Commission 2014, Natural Disaster Funding Arrangements, Inquiry Report no. 74, Canberra. JEL code: H77, H84 at volume 2, Page 456 (RCN.001.001.2199)

<sup>8</sup> NND.001.01368.01\_0007 – XDI, Page 5, paragraph 1.

*regulation being applied.*<sup>9</sup> This legacy risk has been noted as a key area of concern of the Insurance Council of Australia,<sup>10</sup> who also noted that *“insurance data indicates that for destroyed and damaged residential buildings:*

- *99 per cent were located on or within 500m of land declared as bushfire prone; and*
- *74 per cent were built before the introduction of AS3959”*<sup>11</sup>

16. The Property Council of Australia, has also said that: *“inappropriate building design and construction in the past has been widespread, leading to a built environment susceptible to damage.”*<sup>12</sup>

17. In 2014, in its report on “Natural Disaster Funding Arrangements”, the Productivity Commission helpfully summarised the jurisdictional arrangements in respect of the land use planning and building regulations. In summary, the points they made were as follows:

### **Land use planning**

18. Land use planning is a shared responsibility of state and local governments, with specific arrangements varying according to the jurisdiction.

19. State and Territory governments have primary responsibility for land use planning regulation. Through various mechanisms, State and Territory governments set the risk appetite by developing land use planning frameworks, which take the form of state and territory wide planning legislation and policy documents.

20. Local governments are responsible for interpreting and implementing land use planning legislative and policy frameworks through local planning schemes and are largely responsible for decisions on development applications, with variations depending on the jurisdiction. Some notable exceptions are the Northern Territory, in which the land use planning process is the responsibility of the Northern Territory government, and the Australian Capital Territory, where this is no local government.<sup>13</sup>

### **Building regulations**

21. Building regulation is also a shared responsibility of State and Local governments, with some variance in specific arrangements across the jurisdictions.

22. State and Territory governments have primary responsibility for building regulations. However, they have agreed to operate under national standards with the National Construction Code (**NCC**), which was developed and maintained by the Australian Building Codes Board (**ABCB**). The ABCB was established in a 1994 COAG intergovernmental agreement as the body responsible for writing the standards for the NCC<sup>14</sup>

23. There are three standards that are specifically directed to buildings in bushfire prone areas.

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<sup>9</sup> BBC.500.001.0004 – Bushfire Building Council, Page 2, paragraph 5.

<sup>10</sup> NND.600.00192\_0010 – Insurance Council of Australia, Page 10, paragraph 2.

<sup>11</sup> ICA.501.001.0004 – Insurance Council of Australia, Page 4, paragraph 7.

<sup>12</sup> NND.001.01141.01 – Property Council of Australia, Page 5, paragraph 7.

<sup>13</sup> Productivity Commission 2014, Natural Disaster Funding Arrangements, Inquiry Report no. 74, Canberra. JEL code: H77, H84 at volume 2, Page 458 (RCN.001.001.2199)

<sup>14</sup> Productivity Commission 2014, Natural Disaster Funding Arrangements, Inquiry Report no. 74, Canberra. JEL code: H77, H84 at volume 2, Pages 478 to 479 (RCN.001.001.2199)

- *AS 3959:2018 Construction of buildings in bushfire-prone areas.* This standard applies to the construction of buildings on properties within an area designated as “bushfire prone”. It includes a method for assessing the **Bushfire Attack Level** or **BAL** for a property. The **BAL** will determine what measures should be implemented in the construction or renovation of a building. The higher the BAL the more stringent the measures. The **Forest Fire Danger Index** (FFDI or FDI) is one factor in assessing the BAL; other factors are the local topography (slope), vegetation type and distance between the home and the vegetation.<sup>15</sup>
- *AS 5414:2014: Bushfire water spray systems* – this standard sets out the requirements for building a bushfire sprinkler system.
- *Performance Standard: The Design and Construction of Private Bushfire Shelters* – this performance standard was published in 2014 by the Australian Building Codes Board. It specifies design standards, requirements and considerations for private shelters intended to keep property owners or occupiers safe while a bushfire passes.<sup>16</sup>

### **Local government**

24. Last week you heard evidence from Local Governments. A number of themes relevant to today emerged from this evidence including:

- the importance of land-use planning, with Richmond Valley Council saying that *“from a council perspective, land use planning is probably our biggest area with regards to mitigation.”*<sup>17</sup>
- the importance of data to inform land-use planning decisions, the Local Government Association of Queensland noted a program they undertook to *“to assist our local governments to better understand the implications of sea level rise and how that was ... going to present in terms of loss of assets, loss of productivity and loss of significant natural values.”*<sup>18</sup>
- in relation to assessing and managing vulnerability, Wollondilly Shire Council said *“our biggest concern and biggest risk is how are we going to get people out of the areas. We are a growth area ... it's the accumulative effect of all these different housing developments in different places that needs to look at what infrastructure is needed to be put into place to ensure there is essential evacuation routes, so people can get out if need to.”*<sup>19</sup>

25. Some local councils also noted that compliance with land use planning regimes and building standards can be lacking, and there is a need for greater resourcing to ensure compliance.<sup>20</sup> On this last point, Eurobodalla Shire Council said that: *“Council is not resourced nor does it have the necessary skills required to undertake detailed assessment of the effectiveness of the construction and asset protection standards applied.”*<sup>21</sup>

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<sup>15</sup> STA.500.001.0001 at Page 4

<sup>16</sup> <https://www.abcb.gov.au/Resources/Publications/Education-Training/Private-Bushfire-Shelters>

<sup>17</sup> Hearing Block 2, Day 10, Transcript, Page 893, Lines 40-43.

<sup>18</sup> Hearing Block 2, Day 10, Transcript, Page 872-873, Lines 45-46, and 1-3.

<sup>19</sup> Hearing Block 2, Day 12, Transcript, Page 1081, Lines 15 - 21

<sup>20</sup> NND.600.00277\_00009 – Moreton Bay Regional Council, page 8, paragraph9; BMC.500.001.0003 – Blue Mountains Council, page 10, paragraph 5; NND.001.01241.01\_0002 - Queanbeyan-Palerang Regional Council, page 2, paragraph 5.

<sup>21</sup> ESC.500.001.0016 – Eurobodalla Shire Council, page 15, paragraph 1.

26. Commissioners, I note that we are not covering new ground here.
27. In 2002, one of the 12 reform commitments in the COAG report “Natural Disasters in Australia: Reforming mitigation, relief and recovery arrangements” was to *“take action to ensure more effective ... land use planning, development and building control regimes that systematically identify natural hazards and include measures to reduce the risk of damage from these natural hazards.”*<sup>22</sup>
28. In the 2004 National Inquiry on Bushfire Mitigation and Management, one of the three main elements to reduce natural hazard risk was identified as *“planning processes that ensure that built assets are not placed in areas of high fire risk and that structures meet standards of construction that reduce their vulnerability.”*<sup>23</sup>
29. In 2011, the National Strategy for Disaster Resilience acknowledged the increasing severity and regularity of disasters in Australia and the need for a coordinated, cooperative national effort to enhance Australia's capacity to withstand and recover from emergencies and disasters in relation to land use planning and the built environment and identified the following *“priority outcomes”*:
- *“All levels of decision making in land use planning and building control systems take into account information on risks to the social, built, economic and natural environments;*
  - *Information on the likelihood of damage from hazards is actively shared, and tools are available to support understanding of potential consequences and costs; and*
  - *Building standards and their implementation are regularly reviewed to ensure they are appropriate for the risk environment.”*<sup>24</sup>
30. In 2012, a Roadmap for Enhancing Disaster Resilience in the Built Environment was finalised by the Land Use Planning and Building Codes Taskforce, a working group of the National Emergency Management Committee.<sup>25</sup> The Roadmap was developed as a “key deliverable” of the Implementation Plan for the *National Strategy for Disaster Resilience*. The *National Strategy for Disaster Resilience* was endorsed by COAG in 2011.
31. The Roadmap proposed a fundamental shift in strategy, with a greater focus on mitigation through reform of land use planning and building regulation. The implementation of a “comprehensive framework for the development of nationally consistent ‘fit for purpose’ hazard research, data,

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<sup>22</sup> Natural Disasters in Australia: Reforming mitigation, relief and recovery arrangements, 2002, Page vi, paragraph 10  
<http://lib.riskreductionafrica.org/bitstream/handle/123456789/1386/4220.Natural%20disasters%20in%20Australia.%20Reforming%20mitigation%20relief%20and%20recovery%20arrangements.pdf?sequence=1&isAllowed=y>

<sup>23</sup> National Inquiry on Bushfire Mitigation and Management, 2004, page xiv, paragraph 4,  
[https://www.dfes.wa.gov.au/publications/GeneralReports/FESA\\_Report-NationalInquiryonBushfireMitigationandManagement.pdf](https://www.dfes.wa.gov.au/publications/GeneralReports/FESA_Report-NationalInquiryonBushfireMitigationandManagement.pdf)

<sup>24</sup> National Strategy for Disaster Resilience, 2011, Page 12, paragraphs 1-3,  
<https://knowledge.aidr.org.au/media/2153/nationalstrategyfordisasterresilience.pdf>

<sup>25</sup> EPA.500.001.1491 - Roadmap: Enhancing Disaster Resilience in the Built Environment

modelling and mapping”<sup>26</sup> was identified as an activity for “immediate” action.<sup>27</sup> The implementation performance measures were identified as:

- Is hazard mapping, modelling and information freely available with more coverage across the jurisdiction?
- Have national standards been developed for mapping of all priority hazards?
- Has ownership of hazard data become clear?<sup>28</sup>

32. In 2013, the Productivity Commission’s Barriers to Effective Climate Change Adaptation recommended that “as a priority, state and territory governments should ensure that land-use planning systems are sufficiently flexible to enable a risk management approach to incorporating climate change risks into planning decisions at the state, territory, regional and local government levels.”<sup>29</sup>
33. In 2013, the Australian Business Roundtable for Disaster Resilience and Safer Communities, a group comprised of representatives for large charities and corporations including the Red Cross, IAG and Westpac, released the paper “Building our nation’s resilience to natural disasters”. This paper noted that “Careful consideration needs to be given to zoning land for residential or commercial use which is, or becomes, vulnerable to threats posed by natural disasters.”<sup>30</sup>
34. The roundtable then released three subsequent papers in 2016 and 2017, the latest of which estimated the “the total economic cost of natural disasters is growing and will reach \$39 billion per year by 2050,”<sup>31</sup> and argued that “land use planning systems are yet to fully embrace their role in mitigating the risks to loss of life, property damage and destruction of vital infrastructure arising from natural hazards and climate change.”<sup>32</sup>
35. In 2015, the Productivity Commission did a review into natural disaster funding arrangements and recommended that state governments “clearly articulate the state-wide natural hazard risk appetite in land use planning policy frameworks by identifying the risks posed by natural hazards and specifying appropriate planning controls for each given level of risk.”<sup>33</sup>

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<sup>26</sup> EPA.500.001.1491 - Roadmap: Enhancing Disaster Resilience in the Built Environment at Page 24

<sup>27</sup> EPA.500.001.1491 - Roadmap: Enhancing Disaster Resilience in the Built Environment at Page 21

<sup>28</sup> EPA.500.001.1491 - Roadmap: Enhancing Disaster Resilience in the Built Environment at Page 24

<sup>29</sup> Productivity Commission Inquiry into Barriers to Effective Climate Change Adaptation, 2013, pages 28-29, <https://www.pc.gov.au/inquiries/completed/climate-change-adaptation/report/climate-change-adaptation.pdf>

<sup>30</sup> Building our nation’s resilience to natural disasters, Page 3 at Paragraph 9, <http://australianbusinessroundtable.com.au/assets/Natural%20Disaster%20Roundtable%20Paper%20Web%20Version%20January%202014.pdf>

<sup>31</sup> Building resilience to natural disasters in our states and territories, Page iii, Paragraph 3, [http://australianbusinessroundtable.com.au/assets/documents/ABR\\_building-resilience-in-our-states-and-territories.pdf](http://australianbusinessroundtable.com.au/assets/documents/ABR_building-resilience-in-our-states-and-territories.pdf)

<sup>32</sup> Building resilience to natural disasters in our states and territories, Page 52, Paragraph 1, [http://australianbusinessroundtable.com.au/assets/documents/ABR\\_building-resilience-in-our-states-and-territories.pdf](http://australianbusinessroundtable.com.au/assets/documents/ABR_building-resilience-in-our-states-and-territories.pdf)

<sup>33</sup> Productivity Commission Natural Disaster Funding Inquiry, 2015

36. In March this year, COAG endorsed another framework,<sup>34</sup> the *National Disaster Risk Reduction Framework*.<sup>35</sup> Under this framework there are familiar strategies. The framework notes that: *“To improve resilience in the built environment, further attention is needed to remove disincentives and strengthen planning and development practices while ensuring the sustainable needs of Australia’s growing population are met. Earlier work to implement the Enhancing Disaster Resilience in the Built Environment Roadmap should be leveraged to help deliver this.”*<sup>36</sup>

The new Framework also recommends that *“integrated and robust frameworks are used to assess and reduce disaster risk in all environments but particularly infrastructure land use and development planning”*.<sup>37</sup>

37. The evidence today will explore key issues that have been identified in previous enquiries and reviews.

### Scenarios

38. Commissioners, as you are also aware, the Commission issued a number of scenarios to the states and territories, requesting information about the current processes governing land use planning regimes.

39. These scenarios identify two matters we will explore further with the States and Territories today:

- Across jurisdictions, there is either no or little obligation for property owners to address legacy risk; and
- The transfer of natural hazard risk in the land use planning process, including to communities and individuals.

### Witnesses

40. The first witness today is Professor Alan March from the University of Melbourne. He is a professor in urban planning. His particular interest is the ways that planning and design can modify disaster risks, and researches urban design principles for bushfire.
41. He will be followed by two panels. The **first panel** of witnesses are from the peak bodies of the professionals involved in land use planning, building design and property development. This panel will explore exposure and vulnerability in the built environment in the context of bushfires.
42. The **second panel** of witnesses are from organisations whose products or services are informed by natural hazard risk and access to information. This panel will explore the access to and availability of natural hazard risk information and how it informs decisions of various stakeholders.
43. In the afternoon, you will hear evidence from the States and Territories. The State of Tasmania has provided a whole of government submission to the Commission that does addresses some of the topics to be explored today. This submission is tender no 19.17.1. However, it has not provided a witness.

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<sup>34</sup> COAG Meeting Communique, 13 March 2020, Page 2

<sup>35</sup> HAF.8001.0001.0049

<sup>36</sup> HAF.8001.0001.0049 at 12

<sup>37</sup> HAF.8001.0001.0049 at 14

**Tender**

44. I tender the documents listed in the tender list provided by counsel assisting. Commissioners this is at volume 1, tab A of your bundle.
45. The documents in the tender list include, for each witness, either a submission and/or an organisational response to a notice issued by the Commission and various policy documents.
46. I tender all of the documents in the tender list as a bulk tender. We seek a direction that the documents identified on the tender list, together with the document identification number, be recorded on the transcript as the documents tendered today.