Submission to the Royal Commission into National Natural Disaster Arrangements

June 2020
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EXECUTIVE SUMMARY

The key elements of the Tasmanian Government submission to the Natural Disaster Royal Commission are summarised below as they relate to the Letters Patent.

**Letters Patent: Matter a:** The responsibilities of, and coordination between, the Commonwealth and state, territory and local governments relating to preparedness for, response to, resilience to, and recovery from, natural disasters, and what should be done to improve these arrangements, including with respect to resource sharing.

- Emergency Management Australia should be resourced to lead the development of national response and recovery frameworks, guided by the Australia New Zealand Emergency Management Committee.
- The Australian Government should ensure disaster resilience initiatives are funded sufficiently.
- National funding arrangements should be better aligned with the Sendai Framework “Build Back Better” approach to disaster reconstruction.
- Commonwealth contributions to costs of defending environmental values and cultural heritage should be included as a standard measure under the Disaster Recovery Funding Arrangements (DRFA).
- The process to access Australian Government disaster recovery funding should be streamlined.
- National funding arrangements should be introduced for critical communications capabilities – the Emergency Alert telephone warning system and Public Safety Mobile Broadband.
- National arrangements in relation to recovery should reflect the importance of community led recovery and the diversity of community needs.

**Letters Patent: Matter b:** Australia’s arrangements for improving resilience and adapting to changing climatic conditions, what actions should be taken to mitigate the impacts of natural disasters, and whether accountability for natural disaster risk management, preparedness, resilience and recovery should be enhanced, including through a nationally consistent accountability and reporting framework and national standards.

- A nationally coordinated approach to the timely delivery of reliable data on natural hazards should be developed to inform land use planning and natural hazard management, along with practical guidance and technical support for its use.
- A framework should be developed for professionals involved in the land use planning process and building control environment to better consider and address natural hazard risks.

**Letters Patent: Matter c(ii):** Whether changes are needed to Australia’s legal framework for the involvement of the Commonwealth in responding to national emergencies, including in relation to the following:

(ii) whether the Commonwealth Government should have the power to declare a state of national emergency;

- Emergency management is appropriately a state and territory responsibility. Tasmania does not support any referral of powers to the Australian Government in relation to response to natural disasters.
However, the Tasmanian Government does support arrangements for the Australian Government to be able to declare a national emergency, in consultation with the state and territory governments, to enable national coordination of the response to a natural disaster.

Any such arrangements need to take account of the needs of smaller jurisdictions and there needs to be a framework for allocation of resources in response to an emergency based on agreed principles, including that resources are allocated on the basis of need.

**Letters Patent: Matter c(iv):** Whether changes are needed to Australia's legal framework for the involvement of the Commonwealth in responding to national emergencies, including in relation to the following:

(iv) whether in the circumstances of such a national declaration, the Commonwealth Government should have clearer authority to take action (including, but without limitation, through the deployment of the Australian Defence Force) in the national interest;

Deployment of the Australian Defence Force (ADF) should continue to be at the request of states and territories only. Work should be undertaken to improve the responsiveness of the process for ADF roll-out and to enable greater clarity in relation to what resources and capabilities the ADF can provide in an emergency situation, and the costs associated with deployment.

**Letters Patent: Matter f(i):** Ways in which Australia could achieve greater national coordination and accountability – through common national standards, rule-making, reporting and data-sharing – with respect to key preparedness and resilience responsibilities, including for the following:

(i) land management, including hazard reduction measures.

Any investment in greater coordination and accountability for preparedness and resilience responsibilities should be conducted through existing mechanisms such as Emergency Management Australia, the Australia-New Zealand Emergency Management Committee and the Australasian Fire and Emergency Services Council National Resource Sharing Centre.

Tasmania would be willing to explore with other jurisdictions what could be achieved through national collaboration on fuel reduction activity, noting the challenges associated with taking a nationally consistent approach in this area.

**Letters Patent: Matter f(iii):** Ways in which Australia could achieve greater national coordination and accountability – through common national standards, rule-making, reporting and data-sharing – with respect to key preparedness and resilience responsibilities, including for the following:

(iii) land-use planning, zoning and development approval (including building standards), urban safety, construction of public infrastructure, and the incorporation of natural disaster considerations.

Suggested improvements to building standards and policy coordination to mitigate natural hazards includes:

**The National Construction Code (NCC)**

- Update the general technical standards for construction referenced in the NCC.
- Develop new standards for a particular type of hazard, or for mitigation of the higher-end risks posed by a particular hazard type.
- Expand the range of available deemed-to-satisfy performance requirements to replace reliance on developing expensive performance solutions to meet the NCC performance requirements.
- Revise the verification methods specified in the NCC to enable simpler assessment of compliance.
• Review and extend the building classification system in the NCC to specifically cover structures with special or additional building requirements such as: essential water, electrical and telecommunications facilities; medical emergency or surgical facilities; fire and police stations and emergency vehicle garages; utilities or emergency supplies or installations required as backup for buildings and facilities; and emergency shelters, emergency centres and ancillary facilities.

• Conduct research to validate potentially useful bushfire protection measures including new building materials and bushfire spray systems.

**Better national regulatory policy coordination**

• All jurisdictions investigate whether the mitigation of natural hazards should be elevated in its importance in regulatory responses.

• Make improving regulatory responses through the coordination of planning building and emergency management controls for the prevention or mitigation of natural hazards as a standing agenda item for all bodies responsible for the coordination of policy development for national building standards.

**Owner Education**

• Undertake further work to educate landowners and land managers of the importance of maintaining mitigation measures designed for any building they own.

**Some additional comments in relation to bushfire**

• Develop nationally consistent methods for quantitative evaluation of bushfire risk to provide greater consistency in strategic planning between jurisdictions.

• Develop a nationally consistent skill set and training pathway for bushfire hazard practitioners to serve developers and the building industry.
2 INTRODUCTION

Tasmania did not suffer impacts of the scale experienced in some other jurisdictions during the 2019/2020 bushfire season, but did suffer an extraordinary fire season in 2018/2019 where a significant area of the state was impacted by fire. Tasmania acknowledges that national arrangements for natural disasters merit review in the light of lessons learned from the response to this unprecedented event and the likelihood that Australia will face similar challenges in the future.

The frequency and intensity of natural disasters are increasing in Australia. The changing climate and changing land use are two significant drivers of these increases. Australian states and territories are expected to experience longer fire seasons with more frequent and intense bushfire events. This is likely to pose a major challenge to fire management, increase disruptions to the economy, and impact globally significant natural and cultural values.

Given this context the Tasmanian Government would like to respond to the matters identified as (a), (b), c(ii), c(iv), f(i) and f(iii) in the Royal Commission’s Letters Patent.

3 LETTERS PATENT – MATTER A

The responsibilities of, and coordination between, the Commonwealth and State, Territory and local governments relating to preparedness for, response to, resilience to, and recovery from, natural disasters, and what should be done to improve these arrangements, including with respect to resource sharing;

3.1 Current arrangements

Current arrangements clearly reflect the Constitutional responsibility of states and territories for planning for and responding to natural disasters. The Australian Government, however has responsibility for coordinating national emergency management policy in collaboration with state and territory governments, local government and businesses; providing support for state and territory mitigation, response and recovery activity; and where required, coordination of the national response to an emergency.

3.1.1 Key Policies

- National Strategy for Disaster Resilience
- National Disaster Risk Reduction Framework
- Australian Emergency Management Arrangements
- National Principles for Disaster Recovery

3.1.2 National Funding Arrangements

- National Partnership Agreement for Disaster Risk Reduction
- Disaster Recovery Funding Arrangements
- National Bushfire Recovery Fund

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1 Australian Emergency Management Arrangements 2019

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3.1.3 Key bodies

Ministerial Council for Police and Emergency Management

The Ministerial Council for Policy and Emergency Management (MCPEM) consists of Ministers for Police and Emergency Management from the Commonwealth, each state and territory, New Zealand, and the President of the Australian Local Government Association. MCPEM focusses on collaboration on law enforcement reform and emergency management.

Emergency Management Australia and ANZEMC

Emergency Management Australia (EMA), within the Australian Government Department of Home Affairs, is the agency responsible for coordinating national effort on emergency management and the Australia-New Zealand Emergency Management Committee (ANZEMC) is the peak government committee responsible for emergency management, with representatives of senior officials from each Australian, state and territory government, plus a member from New Zealand and the Australian Local Government Association.

National Bushfire Recovery Agency

On 6 January 2020, the Prime Minister, the Hon Scott Morrison MP, established the National Bushfire Recovery Agency (NBRA) to lead and coordinate a national response to rebuilding communities affected by the 2019-20 bushfires. The NBRA is responsible for administering the $2 billion National Bushfire Recovery Fund and will develop a National Bushfire Recovery Plan with all fire-affected jurisdictions.

3.1.4 Emergency Management Resource Sharing Arrangements

The AFAC National Resource Sharing Centre

The Australasian Fire and Emergency Services Council (AFAC) National Resource Sharing Centre coordinates international emergency management assistance and builds relationships between fire management communities.

The way in which interstate and international resource requests are shared is becoming increasingly important as Australia experiences longer fire seasons and potentially more extreme storm and cyclone events. In the past decade, Tasmania has had three significant fire seasons, which it could not have managed without calling on interstate and New Zealand resources.

The Arrangement for Interstate Assistance (AIA) is the primary arrangement for mutual assistance in emergency management activities being conducted by Australian and New Zealand agencies. The AIA is maintained by the AFAC National Resource Sharing Centre.

Tasmania is an active participant in the AIA and sent interstate deployments to assist New South Wales, the Australian Capital Territory, Victoria and Queensland during the 2019-20 bushfires. This five month commitment was consistent with the assistance that Tasmania received over the 2018-19 fire season from firefighting personnel from most Australian states and territories, and New Zealand.
The National Aerial Firefighting Centre

The National Aerial Firefighting Centre (NAFC) uses a pool of contracted firefighting aircraft from across Australia. This national aircraft fleet complements aerial firefighting resources that are arranged directly by the states and territories. The national fleet receives funding support from the Australian Government as well as state and territory governments. The NAFC plays a key role in ensuring the sharing of aerial firefighting resources between emergency service and land management agencies throughout Australia, and in the development of national protocols and systems for aerial firefighting. The agency has the ability to use local and national “call when needed” aircraft when conditions exceed the NAFC fleet capacity.

Prior to the 2018-19 fire season a national review of aerial firefighting services was conducted with partner agencies to set the structure of the fleet for the next five years.

Australian Government disaster response plan (COMDISPLAN)

State and territories can apply to the Department of Home Affairs for non-financial assistance from Australian Government agencies in the event of a disaster or emergency.

Defence Aid to the Civil Community

State and territories can apply to the Australian Government Department of Defence to engage the Australian Defence Force (ADF) for assistance in the event of a disaster or emergency. Depending on the circumstances a request for assistance may be direct to local ADF or through the Crisis Coordination Centre within EMA under the COMDISPLAN. The costs of the deployment may need to be covered by the requesting jurisdiction.

3.2 What should be done to improve existing arrangements

3.2.1 Resource Emergency Management Australia to lead development of national response and recovery frameworks, guided by ANZEMC

Australia’s approach in relation to natural disaster risk mitigation is well articulated in the National Strategy for Disaster Resilience and the National Disaster Risk Reduction Framework, however national arrangements in relation to emergency response and recovery are less well developed. EMA is the appropriate body to undertake this work, but needs to be appropriately resourced to undertake the policy development required. ANZEMC has commenced work, through its Community Outcomes and Recovery Subcommittee, on a national approach for recovery but until recently the progression of this work has been mostly dependent upon member jurisdictions’ ability to commit in-kind resources to undertake the policy work. As a result of limited resources in most jurisdictions, progress on key projects has been slow. ANZEMC, with its representative structure and understanding of the emergency management environment, is the appropriate body to oversee this work, but the EMA should be resourced to allow it to take a national leadership role and to undertake work on priority projects with oversight provided by ANZEMC and its sub-committees.

The Australia New Zealand Counter Terrorism Committee (ANZCTC) provides advice in relation to the administration of a special fund to maintain and develop the nation-wide counter-terrorism capability. The fund is administered by the Australian Government on the basis of advice from the ANZCTC. A similar model should be considered in relation to the ANZEMC.
National arrangements in relation to recovery need to acknowledge the importance of community led recovery as reflected in the National Principles for Disaster Recovery and the importance of consistency in financial support in response to disasters so that community expectations are clear. It is also important that those affected in the same way by the same disaster have access to the same level of assistance. As assistance is needs-based some differences may be appropriate but inequities must be avoided.

As noted earlier, EMA is the Australian Government agency responsible for coordinating national effort on emergency management and is the home of the Crisis Coordination Centre. Arrangements during the response and recovery stages should seek to leverage off existing relationships between EMA and states and territories in preference to establishing new arrangements.

3.2.2 Increase funding for resilience

As the total economic cost of natural disasters is forecast to grow, further investment in disaster resilience is essential. The Australian Government should ensure funding made available for the purposes of resilience and risk reduction is sufficient. The Australian Government recently worked with state and territory governments to develop the National Disaster Risk Reduction Framework but there has been a reduction in funding in real terms made available to jurisdictions under the National Partnership Agreement (NPA) for Disaster Resilience (now the NPA for Disaster Risk Reduction). In 2020-21 the Australian Government is providing $26.1 million nationally for resilience ($130.5 million over five years, to be matched by jurisdictions). This amount is much less than the $2 billion being distributed by the NBRA and reflects the imbalance between the priority given to resilience and recovery. The funding commitment is consistent with previous national agreements on resilience, but should be reviewed in light of recent events and evidence that investment in risk reduction significantly reduces the need for recovery funding. The recent fires have shown the impact of a more volatile and changing climate, and funding for prevention and resilience should reflect this context.

In 2014 the Productivity Commission conducted a comprehensive review of natural disaster funding arrangements and recommended that the Australian Government increase its mitigation funding to the states and territories to $200 million per year, allocated to jurisdictions on the basis of natural disaster risk. The Productivity Commission noted that governments overinvest in post-disaster reconstruction and underinvest in mitigation that would limit the impact of natural disasters and that this leads to higher overall costs for the community.

The Australian Business Roundtable for Disaster Resilience and Safer Communities (the Business Roundtable) noted in 2016 that policy development in this area should be based on mitigation of the true economic cost of disasters, including intangible costs such as death and injury, impacts on health and wellbeing, and community connectedness.

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2 Deloitte Access Economics (2017), Building Resilience to Natural Disasters in our states and territories, Australian Business Roundtable for Disaster resilience and Safer Communities.
3 Productivity Commission 2014, Natural Disaster Funding Arrangements p2
4 Productivity Commission 2014, p4
5 Productivity Commission 2014, p2

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The Business Roundtable calculated that $250 million of annual expenditure on pre-disaster resilience at the national level, including funding of education and awareness programs, has the potential to generate budget savings of $12.2 billion for all levels of government (including $9.8 billion for the Australian Government) and would reduce natural disaster costs by more than 50% by 2050.6

3.2.3 Enable building back better

National funding arrangements are in place to assist states, territories, local government and individuals to recover from natural disasters. There is an opportunity to better align these arrangements by the United Nations' Sendai Framework for Disaster Risk Reduction 2015–2030 Priority Action 4 which encourages a "Build Back Better" approach to recovery, rehabilitation and reconstruction?.

The Tasmanian Government notes the importance of funding being directed toward restoring assets damaged in a natural disaster to a more resilient standard. Currently the DRFA provide for betterment but the administrative burden of establishing a case for betterment is onerous. In effect this has meant that jurisdictions need a business case for replacement of the asset prior to it suffering damage in the emergency event. Communities expect essential public assets will be restored quickly after disasters. The need to develop business cases to seek co-funding to rebuild more disaster resilient assets does not meet this community expectation.

There has been only one jurisdiction that has ever successfully made a claim under these provisions. The Tasmanian Government and local government entities in Tasmania do not have the resources to fulfil the administrative requirements of an application for an Australian Government contribution to betterment. It should be noted that the risk for the Australian Government in funding mitigation activity though physical infrastructure is limited by the fact that states and territories co-fund infrastructure reconstruction projects under the DRFA.

In March 2020, the Council of Australian Governments (COAG) agreed to review the DRFA. This review will include consideration of the provisions for building back better.

3.2.4 Enable Commonwealth contributions to costs of defending environmental values and cultural heritage as a standard measure under the DRFA

Under current arrangements, only firefighting costs related to the protection of infrastructure and community are eligible for assistance as a standard measure under the DRFA. Firefighting costs in defence of environmental values or cultural heritage are not eligible for partial reimbursement under the DRFA unless approved by the Prime Minister.

State and territory fire agencies allocate resources in an emergency based on their assessment of priorities within their jurisdiction. It is not appropriate for the DRFA then to allocate financial support for firefighting efforts based on an arbitrary distinction between the types of asset being protected.

Treating all firefighting costs the same under the DRFA will reduce the significant administrative burden associated with submissions for reimbursement under the DRFA, noting that states and territories are only eligible to claim extraordinary firefighting costs and that these costs must reach large expenditure thresholds before being eligible for any Australian Government contribution.

Tasmania has large areas of world and national natural and cultural heritage significance. The Tasmanian Wilderness World Heritage Area (TWWHA) covers one and a half million hectares, or around one-fifth of

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6 The Australian Business Roundtable for Disaster Resilience and Safer Communities 2016
7 Sendai Framework for Disaster Risk Reduction 2015–2030 – website link accessed 21/04/2020,

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Tasmania’s land mass and is inscribed on the World Heritage List under four criteria for “natural heritage” and three criteria for “cultural heritage”. Bushfires present one of the biggest challenges to managing and protecting the values that are recognised as significant to the TWWHA’s World Heritage status.

Many values can be significantly harmed or completely lost following a single bushfire or by an unfavourable fire regime. Examples of some of the most fire-sensitive values in the TWWHA include:

- some categories of Aboriginal heritage sites;
- endemic conifers: King Billy, pine pencil pine and Huon pine;
- deciduous beech;
- rainforest and alpine vegetation;
- some organic soils, including Sphagnum peatlands; and
- breeding habitat of orange-bellied parrots.

In response to the significant bushfire event that impacted the TWWHA in 2016, the Tasmanian Government delivered the TWWHA Bushfire and Climate Change Research Project. This project confirmed the TWWHA is likely to experience increasing bushfire risk as a result of a changing climate, and that the conditions that led to the 2016 bushfires are expected to become more frequent as the century progresses (this includes: vegetation soil dryness and flammability, and increased occurrences of dry lightning ignitions).

The recent fire history in Tasmanian wilderness areas shows an increase in the frequency of years with major fire events, in both the number of fires and area burnt. There were major fire events in these areas in 2006-07, 2012-13, 2015-16 and 2018-19. The 2016 and 2019 fires resulted in some of the largest areas burnt within the TWWHA on record, burning at least 95 430 ha, around 6 per cent of the land in the TWWHA.

The 2016 Tasmanian fires threatened significant environmental and cultural assets including stands of unique old growth vegetation. An area of around 20,000 hectares of the TWWHA was affected by these fires, including about 1466 hectares of threatened and sensitive vegetation communities, some of which may not recover. Other sensitive areas, including Aboriginal and historic heritage areas were also affected by the fires. This firefighting campaign lasted in excess of two months and involved the use of unprecedented levels of inter-state support and aviation resources.

In 2017, the Prime Minister agreed to contribute around $6 million representing 50 per cent of the costs of defending the TWWHA from the 2016 bushfires as an ‘exceptional circumstances’ measure under the then Natural Disaster Relief and Recovery Arrangements (NDRRA).

During February 2019, there were around 700 people working on the fires in Tasmania, with around 182 of those from interstate and New Zealand. The estimated fire suppression cost for fires on reserved land in the 2018/19 fire season is in excess of $50 million. Tasmania is yet to hear whether it will be reimbursed for any of these costs under the DRFA.

The fire response in the summer of 2018-19 included a number of recently adopted strategies including:

- the use of fire retardant delivered by aircraft, and large air tankers;
- targeted protection of high conservation value natural assets, such as King Billy pines; and
- increased planned burning inside and adjacent to the TWWHA.

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8 Press, T, 2016, Tasmanian Wilderness World Heritage Area Bushfire and Climate Change Research Project, p41
The number of lightning fires that may occur simultaneously, as happened in 2016 and 2019, are occurring more frequently. To respond immediately would require a very significant investment and the type of resources required to effectively respond at this scale would include:

- a number of crews to be prepositioned in multiple locations
- two winch capable helicopters on a National Aerial Firefighting Centre seasonal contract;
- winch trained staff;
- specialist firefighting equipment caches for winch capable crews;
- enhancement of a number of helibases to better accommodate helicopters,
- pilot and crew shelter, including overnight accommodation, and
- equipment and fuel.

The Tasmanian Government's fuel reduction burning program has had a significant impact in reducing the severity and spread of fires, and protecting natural and cultural values in wilderness areas. The Tasmanian Government allocated additional funding of $4 million over four years in the 2017-18 Budget for bushfire management in the TWWHA. This comprised:

- $2 million over four years to deliver on a Bushfire Risk Assessment Model, Fire Plan for the TWWHA, model of fire cover, and bushfire recovery rehabilitation trials; and
- an additional $2 million, over four years to support broad-scale fire mitigation activities, primarily fuel reduction burning.

3.2.5 The process to access Australian Government disaster recovery funding should be streamlined

Tasmania finds that the requirements for accessing reimbursement under the DRFA are onerous, time consuming and require significant resourcing. Examples of the overcomplicated nature of the DRFA include:

- The level of information required for all asset reconstruction projects of any size.
- Co-funding for betterment or building assets back to more resilient standards after disasters (as discussed above).
- Activation thresholds and evidentiary requirements for assistance to farmers and small business that mean the provision of this assistance is sometimes delayed for months.
- Audit and assurance processes not recognising the level of financial risk to the Australian Government for different states and territories.
- Distinctions for funding purposes between the classes of assets protected in a disaster.

Removing complexities with the DRFA process would make it easier for state, territory and local governments to administer and facilitate shorter timeframes for submission and acquittal of financial assistance claims.

This problem was noted by the Productivity Commission in its 2015 report which described unnecessary prescriptiveness and red tape that led to wasteful spending. The DRFA reforms undertaken since the Productivity Commission report have increased the administrative burden, particularly in relation to restoring essential public assets. This may be acceptable if the reforms provided some flexibility to rebuild damaged assets to a more disaster resilient standard, but the way the DRFA is being administered, there is little change in this regard from its predecessor, the Natural Disaster Relief and Recovery Arrangements (NDRRA).

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9 Productivity Commission 2014, p15

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3.2.6 National funding arrangements for critical communications capabilities

Emergency Alert

Emergency Alert (EA) is a telephone warning system. It provides the ability to transmit a computer generated voice messages to landlines and text messages to mobile phones within the designated area.

It was introduced after the 2009 Victorian Bushfires. At that time the system was required to be developed quickly and the decision was made to directly negotiate service contracts with the Australian telecommunication carriers, Telstra, Optus and Vodafone. Since 2009 the cost of maintaining EA and the service contracts has been considerable, several hundred million dollars nationally. Jurisdictions contribute to EA costs based on a per capita basis. Tasmania’s share equates to approximately $1.7 million for 2020-21.

It has been previously proposed that the provision of EA by the carriers should to be legislated by the Australian Government as a Community Service Obligation under the Telecommunications Act 1995 (Cwlth). This would ensure that carriers would fund this initiative, recouping the costs though their customers and achieving the same outcome in the most efficient manner possible. ANZEMC recently agreed this option would be considered in the Australian Government’s strategic review into telephony-based warnings technologies being conducted on behalf of the Department of Home Affairs.

Public Safety Mobile Broadband

There is increasing demand for mobile data capabilities by public safety agencies. In December 2018, COAG agreed to the Public Safety Mobile Broadband (PSMB) which “provides the flexibility for jurisdictions to opt-in to the nationwide rollout in a way that takes account of their individual circumstances” (see PSMB Strategic Roadmap).

The capability will require dedicated spectrum, which is allocated by the Australian Communications and Media Authority. COAG has previously noted the importance of ensuring public safety agencies have sufficient spectrum to enable them to meet current and future needs. The Radiocommunications Act 1992 (Cwlth) requires the Australian Government to ‘make adequate provision of spectrum for use by...law enforcement or the provision of emergency services’ (s.3).

The Australian Government is currently seeking $235 million from state and territory governments for the spectrum to enable the PSMB. Tasmania’s view is that the spectrum should be provided at no charge given the public benefit and that they will not be using the spectrum to generate revenue.
4 LETTERS PATENT - MATTER B

Australia’s arrangements for improving resilience and adapting to changing climatic conditions, what actions should be taken to mitigate the impacts of natural disasters, and whether accountability for natural disaster risk management, preparedness, resilience and recovery should be enhanced, including through a nationally consistent accountability and reporting framework and national standards;

The Tasmanian Government supports the approach to disaster risk reduction provided by the Sendai Framework. The priorities for action identified in this Framework provide a suitable context for improving a coordinated national response to natural disasters. These priorities include:

1. Understanding disaster risk;
2. Strengthening disaster risk governance to manage disaster risk;
3. Investing in disaster risk reduction for resilience; and
4. Enhancing disaster preparedness for effective response, and to “Build Back Better” in recovery, rehabilitation and reconstruction.

The Tasmanian Government supports nationally coordinated natural disaster risk management arrangements and actions that align with the Sendai Framework priorities supported by increased Australian Government investment in pre-disaster mitigation, preparation and provision of strong practical guidance.

Tasmania has experienced large scale fires and significant flood events in recent years, impacting on communities, businesses and the Tasmanian Wilderness World Heritage Area (TWWHA). The majority of Tasmania is regarded as bushfire-prone.

In December 2019 the Tasmanian Government launched the Tasmanian Disaster Resilience Strategy. The Strategy is consistent with the National Strategy for Disaster Resilience and the National Risk Reduction Framework and recognises that resilience is a shared responsibility of all tiers of government, the private sector and communities.

Tasmania has existing systems in place regarding bushfire risk assessment and modelling (eg. the Bushfire Risk Assessment Model and the Bushfire Operation Hazard Model). Any national efforts in response to the report should provide flexibility for state and territory-led efforts.

4.1 Climate Change

The Tasmanian Government is implementing a range of measures to improve resilience to the impacts of climate change.

Through Climate Action 21: Tasmania’s Climate Change Action Plan 2017-2021 (Climate Action 21), the Tasmanian Government is working with businesses, industry, communities, households and the scientific community to identify and manage the risks and realise the opportunities of a changing climate. Under Climate Action 21, the Tasmanian Government’s action to support climate change adaptation and build resilience in key areas includes:

• completion of a Tasmanian climate change research gap and opportunity analysis to inform future research priorities;
• research to understand Tasmania’s vulnerability to compound extreme events and their impacts;
• examining the impacts of climate change on bushfire risk in the TWWHA (see below);
• delivering a range of materials to support Tasmanian businesses to better prepare for, and recover from, extreme weather events;
• working with state and local governments to manage the impacts of coastal hazards to existing settlements and values; and
• a focus on the impact of climate change on health outcomes, including identifying emerging threats and health priorities for Tasmania.

These efforts build on existing Tasmanian Government programs to improve the State’s climate change resilience, including:

• the Disaster Planning and Recovery for Tasmanian Businesses project which supported Tasmanian businesses to undertake business continuity planning to prepare for, and respond to, extreme weather events; and
• the RiskReady website which is an online resource that improves community resilience to bushfires, coastal hazards and landslides by providing access to property-specific natural hazard information. It also provides high-level advice on how to reduce the risk of property damage, and directs users to the relevant government agency for more information, including detailed risk mitigation and preparedness advice.

Climate change and bushfire risk in the TWWHA

• In response to the significant bushfire event that impacted the TWWHA in 2016, the Tasmanian Government delivered the TWWHA Bushfire and Climate Change Research Project (the Research Project). The Research Project investigated the impact of climate change on bushfire risks to the TWWHA, and recommended ways to improve how Tasmania prepares for and responds to bushfires in the TWWHA. The Research Project confirmed the TWWHA is likely to experience increasing bushfire risk as a result of a changing climate, and that the conditions that led to the 2016 bushfires are expected to become more frequent as the century progresses (this includes: vegetation soil dryness and flammability, and increased occurrences of dry lightning ignitions).

• The Tasmanian Government is implementing the Research Project’s recommendations. The final report and Tasmanian Government response can be viewed at: http://www.dpac.tas.gov.au/divisions/climatechange/Climate_Change_Priorities/climate_risks_and_opportunities/bushfire_research_project

4.2 Fuel reduction activity

The Tasmania Fire Service (TFS) implements an extensive range of preparedness, response and resilience programs and activities. Among these in the area of community fire safety is the Tasmanian Government Fuel Reduction Program (FRP).

The FRP aims to reduce bushfire risk to communities, critical infrastructure/assets and significant natural values. The Program takes a bushfire risk-based approach, with implementation of fuel reduction burns and other fuel reduction activities in high risk bushfire areas around the State.

The FRP has been nation-leading, taking both a multi-agency and tenure-blind approach to bushfire risk reduction. This has allowed a focus on fuel reduction activities where they provide the greatest bushfire risk reduction benefit to communities, critical infrastructure and significant natural and cultural assets. There are a number of examples where fuel reduction burns in Tasmania have protected communities, infrastructure and assets from bushfires.
The FRP works across three agencies - the TFS, the Tasmania Parks and Wildlife Service (PWS) and Sustainable Timber Tasmania. Program partners undertake fuel reduction burning and other fuel reduction activities on land under their management. The Program is governed by the FRP Steering Committee with representation from heads of the relevant agencies.

The FRP maintains strong connections with and representation on with national bodies including: AFAC and its working groups and programs - Centre of Excellence for Prescribed Burning, Predictive Services Group and Climate Change Group; and the Bushfire Natural Hazards Commonwealth Research Centre. The FRP is also involved in a number of national research project activities relating to aspects of planned burning.

The FRP has strong connections with other states and territories and has provided advice and information to other jurisdictions in the development of their fuel reduction programs, particularly in areas where they have been seeking to implement risk-based, multi-land tenure approaches to fuel reduction.

The FRP has provided resources for state, territory and national bushfire responses. This includes providing resources through the National Resource Sharing Centre during the summer 2019-20 bushfire season.

4.3 Community Resilience

The TFS uses a range of evidence-based strategies to mitigate the impact of natural disaster through improving community resilience and adaptation. The key program delivered to achieve this outcome is the Bushfire-Ready Neighbourhoods program (BRN), a community-based prevention and preparedness program for bushfire prone communities across Tasmania. In 2019, the TFS launched the Disaster Resilience Education Tasmania (DRET) teacher delivery resource, which teaches students the fundamentals of disaster resilience and encourages their participation in the development of safer communities in Tasmania. These strategies are informed by contemporary research and best practice. BRN applies a rigorous evaluation framework incorporating pre and post intervention measures of behavioural change.

4.4 Managing bushfire risk in Tasmania – new actions

Although Tasmania has a nation leading and well-resourced fuel mitigation program, the traditional window available for fuel reduction is narrowing and the intensity of our bushfires is increasing. In response, the Tasmanian Government has committed to introducing legislation to make it easier to reduce fuel and mechanically clear vegetation for a fuel break once a bushfire hazard reduction plan has been issued. The legislation will introduce a new streamlined process to enable fuel loads to be reduced while balancing environment and community concerns.

The Tasmanian Government is also:

- increasing resources to reduce fuel loads and to ensure the State has winch-insertion capability for remote area fire teams to insert specialist fire fighters and respond quickly when needed.
- establishing a new state Operations Centre in a central location from which all of the State’s emergency services may coordinate responses to emergencies.
- creating three new specialist Aboriginal ranger positions within PWS, and the creation of a $100,000 pilot grant program to work with the Aboriginal community to draw on its expertise in fuel reduction and the maintenance of landscapes through cultural burning.

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4.5 Understanding flood and other natural disaster risks

Flood is one of the costliest natural disasters in Australia. These costs, however, may be managed through increased investment in pre-disaster risk management measures and actions to adequately address the increase in flood risks.

The Report of the Independent Review into the Tasmanian Floods of June and July 2016 (the Blake Review) found that Tasmania’s emergency management planning and risk management strategies, structures, and associated arrangements, as related to floods, had a sound basis, were in line with national frameworks and were well articulated and understood by relevant parties. It did find that gaps existed in the currency, consistency and comprehensiveness of flood studies and floods plans.

An important project that resulted from the Blake Review and which provides an example of Australian, state and territory government collaboration to better understand flood risk, is the Tasmanian Flood Mapping Project. This project has been supported by Tasmanian and Australian Government funding and aims to contribute to a greater understanding of state and territory-wide flood risk, to fill knowledge gaps, provide strategic flood risk maps for the state and territory to enable strategic land use planning, inform the application of land use planning and building controls, improve a consistent flood risk management capacity and emergency planning. High resolution data capture and analysis have been core to the progress of this project.

Data is critical to understanding flood and other natural disaster risks and all jurisdictions are dependent on its provision. The Australian Government is best positioned to coordinate investment in the capture, storage, sharing, and analysis of high-resolution land, ocean, bathymetric and meteorological data and associated computational environments. Provision of strong practical national guidance and technical support is required to support the strategic application of this complex information across all jurisdictions.

A nationally coordinated approach to the timely delivery of reliable and relevant data, along with practical guidance and technical support for its use, would assist all levels of government, communities and businesses to base their disaster risk management needs on a robust and defensible understanding of disaster risk, which includes an understanding of vulnerability, capability and capacity, exposure of people and assets, hazard characteristics and environments.

4.5.1 Land Use Planning, Building Controls and the Provision of Information

Land use planning and building controls are some of the most effective flood risk mitigation measures. Tasmania’s land use planning system is administered through the Tasmanian Resource Management and Planning System (RMPS) which was established as Tasmania’s integrated planning and environmental management system. The RMPS includes a suite of laws, policies and technical guidance related to the sustainable use and development of the natural and physical resources. The Tasmanian Land Use Planning and Approvals Act 1993 (LUPA Act) is the key legislation under the RMPS and sets the framework for developing policies, strategies and planning schemes that regulate land use and development in Tasmania including flood and other natural hazards risk management.

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11 Australian Disaster Resilience Handbook Collection – Guideline 7-5 - Flood Information to Support Land-use Planning – website link accessed 22/04/2020
12 ABCB Standard 2012.3 - Construction of buildings in flood hazard areas – website link accessed 22/04/2020

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In order that land use planning and building controls can be adequately applied, a comprehensive understanding of flood and other natural hazard risk is required. The models used to provide the understanding of risk are dependent on high-quality and high-resolution data and should be subject to periodic review. The Tasmanian Government supports a role for the Australian Government with respect to data capture and the provision of information to inform land use planning and natural hazard management. The National Flood Risk Information Project (NFRIP) and the Tasmanian Strategic Flood Mapping Project are examples of how the Australian Government has responded to a need for information about flood risk.

Following the devastating floods across Eastern Australia in 2011, the Australian Government initiated the Natural Disaster Insurance Review. This Review highlighted the lack of consistency across the country in the way flood risk information was collected and made available to users. The Review also recognised the need for consumers to be aware of the natural disaster risks they may face, as well as the benefits of making flood risk information more readily accessible.

In response to these findings, the Australian Government established the NFRIP with the aim of improving the quality, availability and accessibility of flood information across Australia and, in doing so, raise community awareness of flood risks. This four year project commenced on 1 July 2012 and delivered three products: the Australian Flood Risk Information Portal, Water Observations from Space and the Australian Rainfall and Runoff Guidelines. The Tasmanian Government strongly supports the ongoing role and responsibility of the Australian Government to invest in the upkeep and maintenance of these important information systems.

The Tasmanian Strategic Flood Mapping Project was initiated by the Australian and Tasmanian Governments following the 2016 floods. The purpose of the project is to capture the high resolution terrain (height) information to support flood studies, to develop a baseline strategic flood model of the 2%, 1% and 0.5% Annual Exceedance Probability flood events now and in 2100 for Tasmania, and to support detailed studies in the most at risk locations. This is an example of how the Australian Government is supporting Tasmania in understanding the risk from flooding by developing the evidence base of flood hazards. This information will be used to develop consistent planning and building controls and tools to better communicate risks to individuals and businesses.

There are opportunities for the Australian Government to take a role in the upskilling of land use planners and other professionals involved in the planning process and building control environment, to better consider flood and other natural hazard risks. This role should include preparing clear guidance, codes and standards to address risk, along with associated education programs.

As members of AFAC, Tasmania State Emergency Service and TFS are actively working to incorporate climate change and natural disaster risk management into land use planning and building control systems across Australia. Current work includes the review of the Australian Institute Disaster Resilience (AIDR) Guideline – Flood Information to Support Land Use Planning, and support for the improvement of the

14 Australian Government – Geoscience Australia - Australian Flood Risk Information Portal
15 Australian Government – Geoscience Australia – Water Observations from Space
16 Australian Government – Geoscience Australia – Rainfall and Runoff Guidelines
National Construction Code in accordance with the CANZUS Outcomes Statement on Building Resilience and Changing Natural Hazard Risks (the CANZUS Statement).

4.6 Coastal Hazards

The Tasmanian Government aims to work collaboratively with the Australian Government and other state and territory governments, to address coastal hazards and climate change matters through its active participation in the recently established Intergovernmental Coastal Hazards Working Group.

Coastal hazard management for new development and building works is provided for in the Tasmanian land use planning and building control systems. Tasmania’s State Coastal Policy 1996 identifies specific strategic outcomes in relation to coastal hazards (including flooding, storms, erosion, landslip, littoral drift, dune mobility and sea-level rise). The regional land use strategies, established under the LUPA Act, set strategic land use planning directions for zoning of land and the implementation of mapped overlays for managing use and development in areas susceptible to natural hazards, including coastal hazards. The State Planning Provisions component of the future Tasmanian Planning Scheme also set the statewide consistent provisions for managing use and development, including for risks from coastal inundation and coastal erosion hazards, in conjunction with the building control system under the Building Act 2016.

Given the significant potential impacts that coastal hazards pose to existing settlements, land, people and assets in Tasmania, there is scope for greater government, community and business coastal hazard management adaption to improve resilience.

The Tasmanian Government notes the wide range of submissions provided by Government agencies, businesses and individuals to the Senate Environment and Communications References Committee’s inquiry into Current and Future Impacts of Climate Change on Housing, Buildings and Infrastructure 17. The Inquiry report’s findings contribute to the information used by the Tasmanian Government to inform its actions to manage coastal hazards and other natural disaster impacts on the built environment, in the context of a changing climate.

5 LETTERS PATENT - MATTER C(II)

Whether changes are needed to Australia’s legal framework for the involvement of the Commonwealth in responding to national emergencies, including in relation to the following

(ii) whether the Commonwealth Government should have the power to declare a state of national emergency;

The Tasmanian Government supports clarification of the roles of the Commonwealth, states and territories in an emergency of national significance. As identified earlier in this submission, the EMA should be resourced to play a leadership role in this space and lead or undertake work to further develop national arrangements for preparedness for, response to, resilience to, and recovery from, natural disasters with oversight by ANZEMC and its committees.

Emergency management is appropriately a state and territory responsibility. The Tasmanian Government does not support any referral of powers to the Australian Government in relation to the response to or recovery from natural disasters. States and territories have individual arrangements in relation to

17 Australian Senate Environment and Communications References Committee Inquiry Report 2018 – Current and future impacts of climate change on housing, buildings and infrastructure

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emergency management that reflect local needs and it is appropriate that responses to natural disasters are locally led.

The Tasmanian Government does support, however, arrangements for the Australian Government to be able to declare a national emergency, in consultation with the states and territories, to enable national coordination of the response to a natural disaster. The experience from the current arrangements in relation to the response to the COVID-19 health emergency, including the operation of the National Cabinet and the Australian Health Protection Principal Committee, should inform the governance model for coordination. Both bodies are examples of the Australian, state and territory governments working collaboratively to make a strategic response to a national emergency, allowing national coordination and state-based solutions.

Any such arrangement needs to take account of the needs of smaller jurisdictions and there should be a framework for allocation of resources in response to an emergency based on agreed principles. Such principles should ensure that resources are not allocated simply on the basis of population but also consider underlying community vulnerabilities which are likely to reflect needs for assistance.

6 LETTERS PATENT - MATTER C(II)

Letters Patent: Matter c(iv): Whether changes are needed to Australia's legal framework for the involvement of the Commonwealth in responding to national emergencies, including in relation to the following:

(iv) whether in the circumstances of such a national declaration, the Commonwealth Government should have clearer authority to take action (including, but without limitation, through the deployment of the Australian Defence Force) in the national interest;

Deployment of the Australian Defence Force (ADF) should continue to be at the request of states and territories only. There is scope for improvement of the process for ADF roll-out so that there is greater clarity in relation to what resources and capabilities the ADF can provide in an emergency situation, and the estimated costs associated with deployment as these costs may need to be covered by the requesting jurisdiction.

These costs are not always made available at the time of the request and the scale of expense is not always anticipated. Work to provide guidance on scenarios where costs will be waived or incurred by the jurisdictions before ADF resources are committed would be of value. An example of this was the uncertainly around what costs would be incurred by Tasmania if the Joint Task Force IIII was to undertake activities in support of Tasmania’s response to the 2019-20 fire season.

It should be noted that potential costs for ADF support in response to COVID-19 has been clearly articulated as part of the Memorandum of Understanding that is signed as part of each request for assistance. The difference in this scenario is that the scope and duration of the assistance has been more easily articulated.
Ways in which Australia could achieve greater national coordination and accountability — through common national standards, rule-making, reporting and data-sharing — with respect to key preparedness and resilience responsibilities, including for the following:

(i) land management, including hazard reduction measures

There is a strong industry national sector and framework currently in place through AFAC, the peak body for the fire and emergency sector, and its working groups. Tasmania is an active participant in all of the activities being conducted by AFAC and related organisations, such as the Bushfire Natural Hazards Commonwealth Research Centre, the Centre of Excellence for Prescribed Burning and Predictive Services Working Groups. Through these bodies, state and territory fire and emergency management agencies share data and develop and improve on operating systems. Any investment in greater coordination and accountability for preparedness and resilience responsibilities should be conducted through existing mechanisms such as EMA, ANZEMC and AFAC.

Tasmania also has long standing and strong working relationships with other state and territory fire and emergency management agencies across Australia.

7.1 Fuel reduction activity

The Tasmanian Government would be willing to explore with other jurisdictions what could be achieved through national collaboration on fuel reduction activity, noting the challenges associated with taking a nationally consistent approach in this area. The diversity of fuel reduction programs, the bushfire risk they respond to and the agency and legislative arrangements within which they operate around Australia would all be barriers to any efforts to develop common standards. Fuel reduction activity requires strong relationships with local communities and this work will always require states and territories to be accountable to the communities they represent.

8 Letters Patent – Matter F(III)

Ways in which Australia could achieve greater national coordination and accountability — through common national standards, rule-making, reporting and data-sharing — with respect to key preparedness and resilience responsibilities, including for the following:

(iii) land-use planning, zoning and development approval (including building standards), urban safety, construction of public infrastructure, and the incorporation of natural disaster considerations

8.1 Addressing natural hazards through the Tasmanian land use planning framework

Tasmania is in the process of implementing a single statewide planning scheme (the Tasmanian Planning Scheme (TPS) which contains codes for managing use and development in areas exposed to risk from natural hazards including bushfires, flood events (riverine and coastal), coastal erosion, and landslip. These codes are supported by statewide building regulations that impose conditions for construction in areas prone to natural hazards.

Implementation of the TPS will deliver greater consistency in the consideration of the risks from natural hazards and improve decision-making. Another key reform will be the establishment of the Tasmanian Planning Policies which will articulate the statewide strategic land use planning principles, including those
relating to settlements and liveable communities and natural hazards, to guide the zoning of land and the application of codes relating to natural hazards.

The three regional land use strategies declared under the LUPA Act set the medium to longer-term strategic land use planning directions for each of the three geographical regions in Tasmania to be delivered through the current planning schemes by way of appropriate zoning and management of natural hazards, particularly in the context of a changing climate. The regional land use strategies guide the zoning of land and the implementation of mapped overlays for managing use and development in areas susceptible to natural hazards, including bushfire, landslide, flooding, and coastal hazards (inundation and erosion).

Proposals for use and development are assessed against the planning scheme codes established under the LUPA Act for natural hazards. Currently, the relevant planning schemes in Tasmania consist of 28 interim planning schemes and two other planning schemes across the 29 local government areas in Tasmania.

The 28 interim planning schemes came into effect between 2013 to 2015 and include a range of Code provisions that aim to manage the impacts of natural hazards, including bushfire, landslide, flooding, and coastal hazards (inundation and erosion).

Significant land use planning reforms have been in progress for a number of years to implement the TPS which will incorporate the statewide consistent provisions for managing use and development (the State Planning Provisions) and the Local Provisions Schedules for each local council area in Tasmania which spatially apply the State Planning Provisions and include any locally unique provisions. The State Planning Provisions include standard requirements for the management of bushfire, landslide, flooding and coastal hazards (inundation and erosion) through the:

- Bushfire-Prone Areas Code
- Coastal Erosion Hazard Code
- Coastal Inundation Hazard Code
- Flood-Prone Areas Hazard Code
- Landslip Hazard Code

In addition to the bushfire-prone areas mapping being implemented by the TFS, in conjunction with local councils, standardised overlay mapping identifying land potential vulnerable to coastal erosion, coastal inundation and landslip hazards has been prepared by the Tasmanian Department of Premier and Cabinet’s Office of Security and Emergency Management through the Mitigating Natural Hazards through Land Use Planning project. The Tasmanian Flood Mapping Project will also deliver statewide mapping on flood-prone areas to support the application of the Flood-Prone Areas Hazard Code in the future Tasmanian Planning Scheme.

All Codes relating to natural hazards in the future TPS are integrated with the building approval process through the Director’s Determination issued under the Building Act 2016.

Another key reform will be the future Tasmanian Planning Policies which will play a critical part in Tasmania’s land use planning system by articulating the statewide strategic land use planning principles, including those relating to settlements and liveable communities and natural hazards.

8.2 Addressing natural hazards through the Tasmanian building regulatory framework

This framework comprises administrative mechanisms (building controls) to govern the approval of building work, and specified technical building standards for required performance of that work:
8.2.1 Responsibilities of state, territory and local governments to prevent or mitigate natural disasters

One means to provide for mitigation of risks from natural hazards is through imposing planning and building standards on land known to be at risk. In Tasmania, standards apply as follows:

- Legal standards for construction necessary for approval of new development and work. They are then implemented by persons contracted by the owner (designers and builders) and also by regulators who have oversight of work (local councils, and private building surveyors engaged by the owner).
- Following completion of that building work, there are often ongoing legal responsibilities of building owners to maintain certain features of their building or premises (such as maintaining bushfire mitigation measures).

8.2.2 Current natural hazard regulation

The types of natural hazards specifically addressed by the Tasmanian building regulatory framework are:

- Bushfire prone areas
- Areas subject to flooding by rivers or streams
- Areas subject to flooding by the sea
- Landslip prone areas

Other types of natural hazards in Tasmania, such as extreme wind, snow loading, Tsunami, avalanche or earthquake, are dealt with by the general structural standards for construction specified in the NCC. They are potentially less probable to occur and cause damage or loss of life.

8.2.3 New Hazard Areas system (currently under staged implementation)

Tasmania’s Director of Building Control has recently approved five new Hazardous Area Determinations that will supersede the current natural hazard regulation, providing coordination with planning controls, to reduce the potential for conflicting or duplicate regulation; the determinations include:

- Bushfire
- Landslip
- Coastal Erosion
- Coastal Inundation
- Riverine Inundation

These new Determinations will:

- Make the building regulatory framework consistent in policy and definitions with the Tasmanian planning reforms being implemented.
• Modernise this area of regulation by allowing referencing of up-to-date mapping of hazard areas and their risk bands (such as bushfire, or landslip areas, being mapped by the TFS or Mineral Resources Tasmania).

• Provide greater certainty and safety to owners that building work in a hazard area will be appropriately assessed and designed to meet the expected level of risk arising from the hazard.

• Provide certainty to industry on the necessary procedures and standards required for design and construction at the beginning of the development cycle.

8.3 Limitations of using building regulations to address natural hazards

Building controls provide a minimum mandatory technical standards to provide for the safety of occupants and other users of buildings. They are a key element of our modern built environment. However, such controls cannot be seen in isolation and they work best when coordinated as through government policy, with planning (land use and development control) and emergency response measures.

The following issues identify some of the current impediments to better regulation of natural hazards through the imposition of building controls.

8.3.1 Implementation of the National Construction Code and standards

The key national technical regulatory document, the National Construction Code (NCC), is primarily focused on life safety rather than property protection. However, the costs of rebuilding structures after a natural disaster event are a heavy burden on owners and for governments. Therefore, greater emphasis on property protection in the future may be warranted from a cost/benefit perspective.

The NCC requires that the performance requirements of a building design be achieved by meeting the relevant performance requirements. That can be done either by adopting a deemed-to-satisfy approach or developing a performance solution. In the absence of suitable deemed-to-satisfy approaches the complexity of designing and constructing buildings suitable for withstanding natural hazards is a significant hurdle for the building industry and requires significant investment in better education and training.

The NCC currently does not yet cover hail, coastal inundation, landslip or have specific requirements relating to heat stress, these are left to state building regulations. It does have provisions for energy efficiency that may mitigate heat stress. In Tasmania the applicable energy provisions only deal with minimising the heating load, and not cooling responses. This may become a significant problem for Tasmania with a warming climate and the likelihood of more days of extreme heat.

Limitations of some current technical standards applicable to natural hazards need to be recognised. An example is the Australian Standard AS 3959 – Construction of buildings in bushfire-prone areas, which is primarily designed for low rise residential buildings, and is not suitable to be applied to the design of larger complex structures such as medical centres, hotels or a prison with a high risk to their occupants.

8.3.2 Extra costs

Land situated in a hazard area requires additional measures in design, regulation and construction in order to provide for the safety and resilience of the building and occupants. The mitigation measures required must be proportionate to the likely severity of a natural hazard, with a higher risk requiring an increased response for from the design, assessment and construction measures, than a development in a lower risk area. The emphasis must always be on ensuring that new building works do not expose the occupants or the building to a foreseeable and mitigatable risk, which if allowed would increase the moral hazard to government and potentially expose approval authorities to claims of negligence.
Effective implementation of planning and building regulations for hazard areas requires training and education for local government and building practitioners across all disciplines. In addition there is a direct cost to government through the development of specialist skills and services within government, identification of hazard areas, development of standards and support materials, review of applications and, in some cases, the accreditation of private hazard assessors, such as the bushfire hazard assessors accredited by the TFS.

8.3.3 Post construction limitations

Standards applied to development and building works will reduce in value over time through the gaining of better understanding of the hazard, an increased exposure to a hazard, or the loss of knowledge on how to maintain a development to the original standard.

Development and building standards apply when a building was constructed, and reflect the level of knowledge of a hazard at that time. There is no requirement to upgrade a building after its completion, unless new building work is performed. Therefore, much of the existing building stock in bushfire prone areas while legal, would not meet the standards as they evolve. This creates a potential ongoing management challenge for government to provide for the safety of that community through emergency management activities or encouraging owners to update their buildings.

An ongoing issue for state, territory and local governments is the enforcement of both planning and building permits to ensure that standards are maintained. For example, building works in bushfire prone areas require the maintenance of a cleared area around a house to reduce the intensity of a fire close to the building and to provide an area in which fire fighters can safely operate during an event. These areas may not be maintained over time as owners change and the use of the land evolves. Resolution of this could sit between permit authorities undertaking audits and issuing compliance notifications and the insurance industry requiring owners demonstrating that they maintain the building to the required standard.

8.3.4 Other limitations

Legacy land use approvals, may give people rights that we now know are not appropriate— it is a decision for the permit authorities on how to safely maintain those rights without compromising the goal of a safe living and working environment, or remove those rights fairly

Building controls are measures specific to the use or construction of buildings on premises or land, which is under the control of the owner. Consideration of similar hazards on adjacent land may be overlooked, or unable to be effectively mitigated through building regulation controls alone.

Design and construction of some types of “public infrastructure” may fall outside the scope of most of the current Tasmanian building regulatory system. Examples include many road and rail bridges owned by state, local government, or government business entities that are excluded from the Tasmanian system. Those bodies self-manage their construction. However, if those structures are to be identified as key assets needed during or after a natural disaster, incorporation of greater resilience into their design through increased regulatory oversight may need to be considered.

The prescribed minimum mitigation measures in building regulation controls are usually not designed for the “worst case” scenarios such as massive bushfires (flame-zone attack) or powerful floods. They are standards that have been are primarily developed for lower intensity fires with ember attacks that can reasonably be fought. If due to a changing climate, more intense events are likely to occur, or such events become more common, then current building standards may be insufficient. However, revising them to be more rigorous, may then be a response that is cost prohibitive to owners and developers.

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Past land use approvals (planning and development) have allowed persons to own land in hazard areas. Attempting mitigation of unacceptably high risks, through imposing more stringent building regulations, may be ineffectual and involve political risks for regulators and governments trying to impose those standards on owners.

8.4 Suggested improvements of technical standards or policy coordination to mitigate natural hazards:

8.4.1 Part I – The National Construction Code (key national technical standards)

General technical standards for construction referenced in the NCC may be inappropriate for a hazard area. They may have become outdated due to a lack of research, or if developed, new standards may not yet have been considered as suitable for adoption in the NCC.

There may also be no appropriate standard for a particular type of hazard, or for mitigation of the higher-end risks posed by a particular hazard type. For example, more robust standards may be required for buildings that are required to survive undamaged and remain operational after high intensity bushfires (e.g. a medical centre). The NCC deems compliance with AS 3959:2018 Construction of buildings in bushfire-prone areas as satisfactory for construction in mitigating bushfires; however, there are significantly increased risks at the higher end of the Bushfire Attack Levels (BAL-40 or BAL-Flame Zone).

The range of available deemed-to-satisfy performance requirements need to be expanded to replace reliance on developing expensive performance solutions to meet the NCC performance requirements.

Bespoke performance solutions that need to be developed to meet NCC performance requirements for a particular building site are expensive. There is a lack of alternative deemed-to-satisfy (tried and tested) approaches that would be simpler and less expensive to comply with.

The verification methods specified in the NCC for assessing compliance with that Code, may be inappropriate for design of new work in hazard areas. Revision of the prescribed methods could include specifying other methodology, or better guidance on how the existing methods for work in hazard areas may be used to verify work as complying with the NCC.

The building classification system used in the NCC could be considered for expansion and revision to specifically include structures with special building requirements (related to their use prior to and during a natural disaster) and also buildings with special post-disaster functions. Examples include:

- Buildings and facilities designated as essential facilities (water, electrical, telecommunications etc).
- Buildings and facilities with special post-disaster functions, such as medical emergency or surgical facilities.
- Emergency service facilities such as fire, police stations and emergency vehicle garages.
- Utilities or emergency supplies or installations required as backup for buildings and facilities.
- Designated emergency shelters, designated emergency centres and ancillary facilities.

The range of bushfire protection measures available for built assets needs to be widened. Infrastructure and building types not currently addressed by the NCC need specific and novel protection measures to be developed. This may include measures that would apply to emergency response facilities, substations and power lines or associated infrastructure that may fall outside the current scope of the NCC, or AS-3959:2018 Construction of buildings in bushfire-prone area. Public research into bushfire protection is needed
to validate potentially useful bushfire protection measures for such things as new building materials and bushfire spray systems.

8.4.2 Part 2 - Better national regulatory policy coordination

National building control policy coordination

Currently the coordination of policy development for national building standards is being undertaken by these bodies:

- The Australian Building Codes Board, which publishes the NCC. Its membership reflects representation of all levels of government and also of industry.
- The Building Ministers' Forum (BMF) is comprised of the building ministers from the eight jurisdictions and the Australian Government and this forum allows discussion of building policy at the highest level in Australia.
- The Building Regulators' Forum was created to advise the BMF and provides an intergovernmental forum for state and territory building regulators to work cooperatively and efficiently on regulatory responses to issues of national significance impacting building and construction in Australia.
- The Senior Officers Group is tasked with providing technical and policy development assistance to the BMF.

Suggestion for improvement

It is suggested that as a broad policy objective of building control, as coordinated between planning and emergency management, all jurisdictions investigate whether the mitigation of natural hazards should be elevated in its importance in regulatory responses.

Improving regulatory responses to the prevention or mitigation of natural hazards, could be a standing agenda item for all of these bodies, in particular for the Australian Building Codes Board that revises and publishes the NCC.

The purpose of this would be to provide consistency across jurisdictions where it is appropriate to do so. It is not recommended that there be a national approach that would preclude each jurisdiction from defining local solutions to local risks, having regard to their own local land use and planning strategies.

Part 3 - Owner Education

More efforts need to be placed on the education of landowners and land managers of the importance of maintaining mitigation measures designed for any building they own.

This will be of greatest value to buildings in bushfire prone areas that have incorporated measures to mitigate flame attack, ember attack, provide water supply and road access, and any required defensive areas around structures where the vegetation is to be managed.