IPWEA
INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA

4 June 2014

Natural Disaster Funding Arrangements
Productivity Commission
LB 2, Collins Street East
Melbourne Vic 8003

Dear Sir/Madam,

Natural Disaster Funding Arrangements – Submission by IPWEA

About IPWEA

The Institute of Public Works Engineering Australasia is the peak body for engineers and other public works professionals working in the Local Government sector across Australia and New Zealand. IPWEA provides representation to State and Commonwealth agencies on key issues affecting the public works sector as well as providing technical support, education programs and networking opportunities for 3,300 public works professionals.

Our membership base is predominately made up of professional engineers and technical staff in local government and the consulting sector. Subsequently our members play a key front line role in the preparation and response to natural disaster events. These responsibilities include both the emergency response and recovery phases. In particular our members are directly responsible for the restoration of essential public assets and services following natural disasters.

Focus of our Submission

NDRRA funding covers a diverse range of initiatives and disaster events. A major component of NDRRA is funding for the Restoration of Essential Public Assets (REPA), which provides grants to local governments and government departments for the restoration of essential eligible public assets to the equivalent of their pre disaster standard.

Given the technical nature, significant cost and criticality of the restoration of essential public assets, the bulk of our submission has focused on Category B and Category D, NDRRA funding and the recent experiences of our Queensland members following the Queensland floods in 2010/11, 2012 and 2013.

Our members have a strong understanding of the NDRRA across all funding categories and we would welcome the opportunity for further round table discussions with the Productivity Commission during the course of the enquiry.

Effectiveness of Current Arrangements

NDRRA funding has been critical in enabling Local Government's (LG) across Australia to respond to natural disasters, both through the emergency response phase and restoration phase. NDRRA funding provides the necessary funds to LG to engage resources to deal with disaster events whilst still providing essential services and key functions to the broader community.

In many cases the scale of restoration works following an event can have significant costs. There are dozens of examples from the 2010/11 and 2013 flood events where the Cat B restoration program was one to two times the LG entire annual budget. Similarly, the frequency of events has a significant impact on some LG's such as those in northern Australia where cyclones are prevalent and declared disaster events can occur on an annual basis.

The current 75% Commonwealth and 25% State funding arrangement allows LG's to respond to these events in a sustainable manner. Without this level of funding it would not be possible for many LG's to reinstate essential public assets to their pre-event standard or a standard which is safe and functional for the community. The loss of essential infrastructure networks has serious social and health impacts on the local community. The loss of essential infrastructure such as major roads, rail, sewer and water supply also has a major impact on the local and State economies.

It is our experience that following major events that many LG's make a significant contribution using their own funds to undertake additional works to improve the resilience and functionality of assets and/or renewal and upgrade works to reduce whole of life costs. These works are typically deemed ineligible under the current NDRRA guidelines. Any reduction to the current funding levels will have serious impacts on the finances of local government and will lead to a significant reduction on the quality of our infrastructure networks.

LG's across Australia have worked effectively with the Commonwealth and State Governments for decades to access NDRRA funding following Natural Disasters; however the unprecedented scale of flooding in Queensland in 2010/11, 2012 and 2013 has necessitated changes to the governance and value for money framework applied to NDRRA funding.

The Queensland Reconstruction Authority (QldRA) was established under the *Queensland Reconstruction Authority Act 2011* following the unprecedented natural disasters that struck Queensland over the summer months of 2010-11. The Authority's role was extended to cover historical disaster events and events of 2012. Subsequently, the *Queensland Reconstruction Authority Amendment Bill 2013* was passed on 14 February

2013 to expand the jurisdiction of the Authority to include recent events of 2013, extending the term of the Authority to 30 June 2015.

The Authority manages and coordinates the Government's program of infrastructure reconstruction within disaster-affected communities. The Authority's role focuses on working with state and local government partners to deliver value for money and best practice expenditure and acquittal of public reconstruction funds.

Following the Authority's regular review process at September 2013, the program of works for events actively managed by the Authority (2009 to 2013) is estimated to be $13.96 billion distributed relatively evenly across Queensland Department of Transport & Main Roads and LG's (*QldRA Monthly Report 2014*). All 73 Local Governments across Queensland were activated for NDRRA following the flooding events that occurred in late 2010 and early 2011.

Whilst there is uncertainty around the frequency of Natural Disaster events in the future it is important that the unprecedented level of significant flood disasters in Queensland not be used as a base line or sole reference point for changes to the NDRRA arrangements as events of this magnitude remain rare. Flood modelling undertaken in some effected areas after the 2010/11 events revealed that the rainfall events were often well in excess of 1 in 100 year event and in some cases up to a 1 in 500 year probability of occurrence.

It is the IPWEA's view that improvements to the NDRRA framework can be made and that there are valuable lessons to be learned from the Queensland Flood events. These learning's range from mitigation through to NDRRA program administration opportunities.

In terms of risk mitigation, some issues that require further investigation and discussion with LG are detailed below:

- review of land use planning schemes;
- development of more robust and reliable flood models;
- ensuring adequate levels of investment in risk management and mitigation, e.g., flood management and flood mitigation measures (not just physical infrastructure but also land use and other controls);
- ensuring asset management planning and investment provides for sustainable infrastructure renewal and maintenance levels to meet defined service levels;
- assisting LG's in developing stronger in-house capability to efficiently and cost effectively deliver major essential public asset restoration programs;

- adopting appropriate asset hierarchies and design and construction standards to provide a suitable level of resilience across asset networks.

In terms of NDRRA provisions and administration key opportunities for improvement include:

- amend the NDRRA guidelines to more clearly specify the format and type of data to be captured following a disaster event to support NDRRA Cat B submissions;
- providing clear guidance on the use and application of current engineering standards for Cat B restoration works;
- through the application of current engineering standards more clearly define what constitutes Betterment works which are ineligible for NDRRA funding;
- allowing full cost reimbursement of all Council labour costs associated with eligible Cat B restoration works where value for money can be demonstrated (in particular Council day labour construction crews).
- providing increased resourcing and improved systems and procedures capacity to State and Federal agencies administrating NDRRA funds such that timely decisions with respect to eligibility and value for money can be made, particularly where scope changes to the original submission are identified.

Betterment

The current Cat B NDRRA funding guidelines are heavily focused on reinstatement of assets to pre-event standard and subsequently there is limited opportunity for LG's to significantly improve the resilience of infrastructure. Where significant improvements to infrastructure resilience and service levels are required LG's are required to fund the "betterment" component of the restoration works that is required in addition to the eligible Cat B funding amount. In some cases, despite there being a strong business case to improve the resilience of assets to reduce the risk of failure, reduce whole of life costs, improve service levels to the community, improve the transport network reliability etc., LG's do not fund the required the "betterment" due to competing financial priorities.

On 28 February 2013, the Commonwealth Government approved funding of $40 million, matching the Queensland Government's $40 million to create the current $80 million Betterment Fund. The intent of betterment is to increase the resilience of Queensland communities to natural disasters, while at the same time reducing future expenditure on asset restoration, reducing incidents, injuries and fatalities during and after natural disasters, and improving asset utility during and after natural disasters.

The program was significantly over subscribed with over $1 billion in betterment project submissions received from LG's through the application process.

There are examples of where Cat D funding has been approved for significant infrastructure resilience and mitigation projects (e.g. Toowoomba Regional Council's $25M Gowrie Creek Catchment Flood Mitigation Program)

Current Engineering Standards

There continues to be uncertainty around what current engineering standards should be applied to REPA works and what criteria is applied by the State and Commonwealth Governments to determine eligibility of costs where the current engineering standards vary from the pre-event engineering standard of the asset. In some cases the application of current engineering standards for REPA works will result in a higher standard of asset being reinstated than that which existed pre-event. Whilst there may be no change to the "service standard" of the asset there may be changes to material types used in construction, geometry (e.g. traffic lane width slightly increases) or introduction of new design elements (e.g., guardrail where there was none before). In some circumstances the cost increase resulting from the application of current engineering standards have been determined as betterment works and ineligible for Cat B funding.

Where the service standard or function of the asset has not significantly changed and the variance to the pre-event asset standard has resulted only from the application of current engineering standards, it is IPWEA's position that all restoration costs should be eligible.

All engineering, including works delivered under the NDRRA, must be delivered to a defined, measurable and appropriate standard. With respect to REPA, eligible works must provide the same function and purpose but incorporate current design and construction techniques. This requirement must be balanced against the obligation to achieve Value for Money and deliver restoration works as cost effectively as possible within the finite resources available to Government.

Engineering solutions must be implemented in accordance with the prevailing laws and Acts. Examples of this include the *Transport Infrastructure Act*, which provides a regime that allows for and encourages effective integrated planning and efficient management of a system of transport infrastructure, and the *Integrated Planning Act (IPA),* which seeks to achieve ecologically sustainable development through coordination, integration, and streamlining of a number of land use planning processes. For example, engineers will use a set of standards and guides during road and bridge construction:

- Manual of Uniform Traffic Control Devices (MUTCD) – to ensure safe and consistent road signage practices across all regions in Australia for the safety of the road user community.

- QDTMR Standard Specification Roads – to ensure that works are carried out by all road construction parties to a consistent standard across the State Roads network in Queensland.
- QDTMR Road Planning and Design Manual (RPDM) – to provide a uniform set of design rules for State Roads network in Queensland.
- IPWEA Standard Drawings – to provide a consistent and reliable set of typical details for community infrastructure across Queensland. The drawings are also being utilised by some other States.
- AUS-SPEC & NATSPEC – national specification's for all building structures, water and waste water, roads, drainage, and parks assets.
- Austroads

Following ex-tropical cyclone Oswald the Queensland and Commonwealth Governments signed a National Partnership Agreement (NPA) to facilitate Queensland's recovery. That agreement strengthened and complemented the existing Natural Disaster Relief and Recovery Arrangements (NDRRA) scheme.

A key component of the agreement is the development of a framework that seeks to ensure disaster damaged public infrastructure is rebuilt utilising current engineering standards. Engineering has evolved into a modern day profession that requires formalised training, the adherence to complex standards and an understanding of contemporary construction practices within complex regulatory and fiscal environments.

The appropriate engineering standard for essential public assets is typically selected by a professional engineer after assessing various parameters such as the asset function, required service standard, asset life, risk of failure and consequence of failure, durability and resilience requirements. The application of current engineering standards is also critical to enable compliance with legislative requirements as well as professional and ethical obligations.

As every project is unique in some aspect, Engineers must use their judgement and experience to select the most appropriate design solution with consideration of factors such as available funds, geographic location, site constraints, construction materials, technology and available labour force.

The current NDRRA Determination does not provide a detailed explanation with regard to current engineering standards and betterment.

To address this shortfall, greater clarity was provided in 2012, in the Building it Back Better resource, a report prepared with input from Griffith University, the University of

Queensland, the Attorney-General's Department (i.e. Emergency Management Australia), and Australian State and Territory Governments:

> *Already, in accordance with contemporary building standards, a restored asset will invariably attain a higher standard than that of the previous structure. In this report however, adherence to betterment principles means restoring an asset to a standard even higher than contemporary building standards, to make it more resilient to the types of natural disasters to which it is susceptible.*
>
> *(Building it Back Better, 2012)*

Engineering standards evolve over time and it is important that engineers remain current and are able to carry out engineering works to the appropriate standard. The process of achieving a value for money outcome is already integral to modern engineering practices. Under normal commercial pressures designers must achieve the appropriate design standard whilst reducing cost and time to construct to stay commercially competitive. The application of cost control principles to the NDRRA value for money strategy is therefore an application of existing engineering practice.

The IPWEA, Engineers Australia and the Queensland University of Technology formed part of a working group with the Queensland Reconstruction Authority in early 2014 to develop a discussion paper on the application of Current Engineering Standards for Government Funded Grant Systems.

Eligibility of LG labour Costs

The NDRRA guidelines place restrictions around the eligibility of costs for Council labour undertaking Cat B REPA works. Our understanding is the ineligibility of day labour has been incorporated into the guidelines on the basis that it was considered difficult to demonstrate value for money outcomes for Council labour costs due to the absence of competitive market tensions and due to the added complexity in demonstrating what labour costs are associated with the extra efforts for flood response and which are associated with the "business as usual" functions of Councils.

The IPWEA believes Council labour costs should be eligible where it can be demonstrated that an equivalent or better value for money (VfM) outcome can be achieved. We are aware of many cases where the costs to undertake Cat B works using day labour have been less than external contractors. In the case of the Qld floods special exemptions have been secured for the 2010/11 and 2013 events to enable Council day labour costs to be recovered under NDRRA arrangements provided VfM can be demonstrated through competitive pricing or utilising relevant benchmark rates. This approach has worked successfully and significant cost savings for all three levels of government achieved.

As Council staff work on their local infrastructure networks every day they have a better understanding of community impacts and expectations, local construction material availability, geological conditions etc. Whilst the use of additional external resources will typically be required for major events, it is IPWEA's position that Council day labour costs should be eligible for Cat B funding provided well-defined VfM can be achieved. This will reduce NDRRA program costs, build LG capacity and provide additional benefits to local communities.

Conclusion

IPWEA recognises the critical function that NDRRA funding plays in the emergency response and recovery phases following Natural Disaster events. Our members are heavily involved in Natural Disaster response and NDRRA funding programs through their engineering and technical roles in local government and private sector.

Our submission has been limited to a small number of key issues associated with NDRRA however we would welcome the opportunity to further discuss these matters and a range of other issues not covered in our submission.

Our President Michael Kahler and Chief Executive Officer, Chris Champion, can provide additional information if required and their contact details are provided below.

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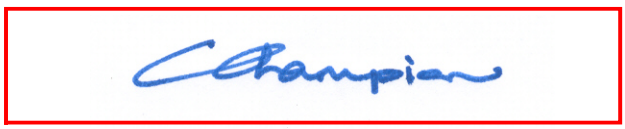
Sincerely,



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