Ministry of Civil Defence & Emergency Management Submission on the Canterbury Earthquakes Royal Commission Discussion Paper: Building Management after Earthquakes

1 Introduction

1.1 Through its discussion paper *Building Management after Earthquakes the* Canterbury Earthquakes Royal Commission (CERC) seeks comment on the implementation and effectiveness of the building management processes used after the 2010 and 2011 Canterbury earthquakes. It asks what lessons can be learnt about how to manage an area's building stock to better meet the goal of ensuring public safety after a disaster. The paper also identifies some options for addressing the issues raised and asks for comment on their advantages and disadvantages.

1.2 Having read the paper and the information previously received by the CERC (listed on p4 of the Discussion Paper), and having experience with the matters raised, the Ministry of Civil Defence & Emergency Management (MCDEM) considers that CERC has a good overview of the circumstances that occurred in Canterbury, and the issues needing to be addressed for such future events.

1.3 This submission has been developed in consultation with the Ministry of Business, Innovation and Employment and the Policy Group of the Department of Internal Affairs.

1.4 The focus of this submission is on those most fundamental aspects of a national framework for building management to cover all hazard risks and event impacts. MCDEM considers that clarifying and setting in place these fundamental aspects (where not already in place or generally understood) are essential first steps to ensuring that the more detailed policy, process and competency issues can be usefully addressed. Our key messages are about such a framework:

- being embedded within 'business as usual' building management and control systems
- having clarity of purpose(s) and acceptability of risks associated with that purpose(s)
- involving clearly understood roles & responsibilities, and means to monitor and evaluate efficacy of arrangements
- maintaining an 'on demand' surge capability (including resources, agreed processes & mandates) to enable effective response and recovery activities as part of any event involving one or more buildings as and when needed.

2 The National Framework for Managing Risks to Buildings Posed by Hazards (including earthquakes)

2.1 MCDEM considers that a national framework for managing buildings impacted by hazards, is based upon the following core premises:

a) Buildings and structures are an essential part of the social, cultural and economic fabric of our society that require maintaining in a functional state both as a stock and through the lifecycle of each building or structure.

b) The New Zealand environment is subject to highly dynamic natural physical processes – earthquakes, volcanism, landslides, tsunami, storms, flooding – that pose risks to buildings and structures and everyday uses of them. Similar risks to buildings and structures come from technical sources – gas explosions, transport accidents, fire. Adopting consistent and integrated means for assessing and addressing such risks as part of each building's lifecycle and as a stock resource within a community and economy, - an 'all hazards-all risks' approach – is necessary.

c) Economic considerations (essentially opportunity costs) and social/cultural considerations (benefits of utilising buildings in certain areas or ways) mean that not all risk to buildings can be avoided. Instead an acceptable level of risk balanced against benefits/costs must be established (e.g. the As Low As Reasonably Practicable [ALARP] principle of risk management). Within such an approach life risk may still be expected to have lower tolerances for acceptability than, for example, maintaining building amenity values. However zero risk, as the term safety may suggest, is most likely unachievable.

d) Establishing acceptable levels of risk associated with buildings, in light of economic, cultural and social considerations, are matters for a holistic building regulatory control (design, construction, use/occupation and maintenance) system to oversee and manage (through the setting and implementation of policies, standards, processes, and compliance & quality assurance mechanisms), together with land-use planning and consenting relating to building site or location. This system must actively engage with stakeholders (industry professionals, building owners & public) in raising awareness and acceptability of the risks to buildings from hazards, and in determining what are best means to reduce (avoid or mitigate) them, and to undertake emergency response and recovery management to address realised impacts of an event, that meet with wider expectations and needs of stakeholders.

e) The building regulatory control system is not static and instead will evolve by incremental adaptation to new knowledge, techniques, and changing objectives relating to buildings and their place in the social, economic, and physical environments.

f) How a building performs in a hazard event is, for the most part, pre-determined by the building controls in place at the time of its design and construction, and the subsequent maintenance and any improvements carried out over its life prior to the event. An essential requirement is that information related to each building (location, use, structural form) is maintained and available to building regulators on an ongoing basis, and can be accessed and shared in support of an emergency.

g) Following a hazard event there is uncertainty as to current 'fitness for purpose' status of those buildings exposed to its impacts. This 'fitness' requires re-establishing (or negating) as quickly as possible through emergency arrangements based on special and/or modified procedures that form part of the standard building control system.

h) These emergency arrangements may involve a series of staged objectives (such as establishing interim structural integrity for rescue/contents recovery through to certifying full functionality) for each building, and also in terms of managing recovery of the building stock as a whole. For example, part of this latter consideration is prioritising critical needs in re-establishing the building stock to enable the community to best cope and recover quickly.

i) These emergency arrangements more often require having a 'surge' or on-demand capability and capacity in terms of resources, accelerated processes and specific knowledge and skills. This capability requires pre-planning and maintaining (continual refreshing) and consistent application in the field, though with sufficient adaptability and agility to manage uncertainty for any particular event, as experienced in Greater Christchurch from 4 September 2010.

j) These emergency arrangements must be undertaken in coordination with the broader emergency response and recovery processes surrounding the event that may require identifying and prioritising needs and resources across life-safety, health, essential services and other social, economic, and environmental impacts.

k) As an emergency shifts from response to recovery the building control system must be able to seamlessly shift from its emergency 'surge' capacity and procedures back towards its standard building regulatory control operating procedures at its own pace, and not be reliant on transitions in management related to other aspects of the event's response and recovery.

3 MCDEM view on achieving effective improvements for a Building Evaluation Framework

3.1 MCDEM is proposing that, to apply the above premises, a clearer mandate and specific provisions are introduced to primary building legislation (the Building Act 2004), and that establishing and maintaining this emergency capability at the national level is undertaken by the department administering that legislation. The implementation of an 'all hazards-all risks' arrangement for building management: - to establish what could happen (the risk), avoid or mitigate the risk in advance (risk reduction), pre-plan to manage (readiness), act in an emergency capacity (response), and transition back to 'business as usual' (recovery) – needs to be addressed in a comprehensive and integrated manner.

3.2 Currently there is an assumption that building triage and rapid evaluation of individual buildings is necessarily integral to CDEM legislative processes and linked to having a state of emergency and a Controller's powers. This need not necessarily be so. A key principle underpinning New Zealand's approach to CDEM is that each sector cluster[1] or agency continues to work through its primary mandates (legislation, operational procedures and resources) as far as practicable, having established potential risks and contingent needs beforehand.

3.3 Important in this arrangement is that an agency at the national level, and whatever form its delivery arm may take at the local level (for example a branch office or a

[1] ww.civildefence.govt.nz/memwebsite.NSF/Files/Cluster%20Fact%20Sheet/$file/Cluster%20Fact%20Sheet.pdf

local authority), is expected to lead in managing all arrangements in its area of responsibilities prior to, during and post event. If the local level arrangements are likely to require additional support to manage these responsibilities (based on scale, duration or complexity of the risks or event) then advice and direction is initially sought through the national lead agency to source and coordinate support from elsewhere across New Zealand. Any pre-planned arrangements to provide extra support and resources, and levels of coordination when called for, can be agreed and documented within or alongside of the National CDEM Plan (and Guide[2]) and CDEM Group planning arrangements.

3.4 Current legislative arrangements are shown graphically in *Figure One,* below. Figure Two, below, shows graphically the proposed arrangements whereby the primary legislation for building management is applied in an emergency context.

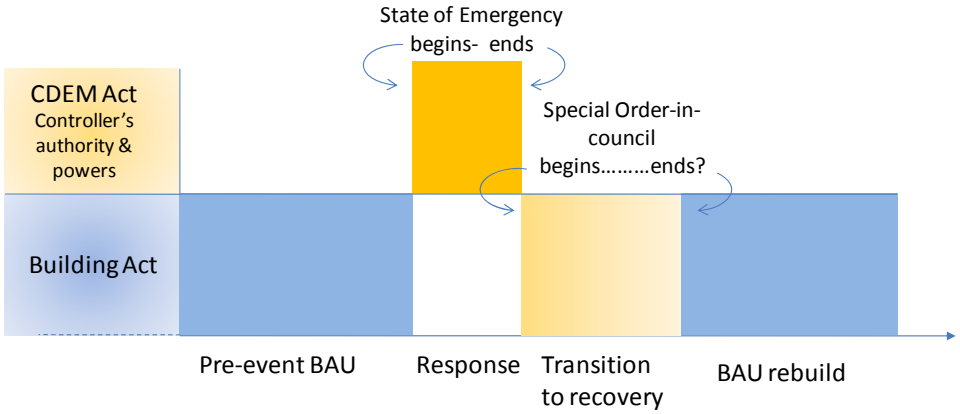

Figure One: **Current building emergency evaluation arrangements without transitions and underpinning BAU support**

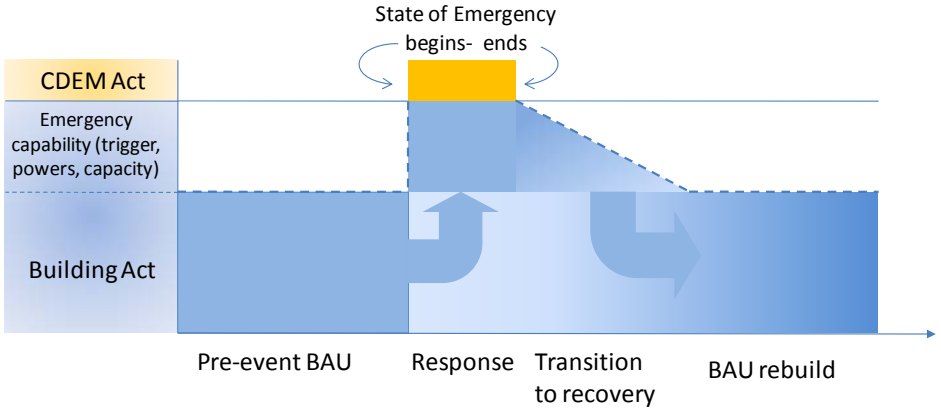

Figure Two: **Proposal for Building Act emergency building evaluation arrangements integrated with BAU arrangements**

[2] www.civildefence.govt.nz/memwebsite.nsf/wpg_URL/For-the-CDEM-Sector-Publications-The-Guide?OpenDocument

3.5 The approach proposed above is intended to overcome a principal cause of many issues identified in the Canterbury experience that led to confusion about individual building's 'fitness for purpose' status and managing competing objectives for the building stock as a whole in support of wider community recovery efforts. A clear mandate and requirements for national pre-planning under primary legislation, and having the necessary capability in place to act beforehand, independent of CDEM Act provisions, could have improved the outcomes overall. In particular, such an approach could have avoided the need for special Orders-in-Council to extend authorisation of building triage status post the State of National Emergency being lifted and the use of different placard systems arising from different management systems applied under different mandates (through lack of central direction on agreed standards, pre-planning and training, and continuity of oversight management on the ground).

3.6 MCDEM is aware that further consideration will need to be given within government policy development processes on the merit and detail of this proposal, including possible consequential amendments to Acts other than the Building Act in support of it (such as local government, cultural heritage, resource management and CDEM legislation).

4 Summary and Recommendations

4.1 MCDEM considers that the management of buildings following the earthquakes of 4 September 2010 and 22 February 2011 was reasonably successful in the circumstances. However, there are opportunities arising from the Canterbury experiences to improve quality assurance procedures, enhance capability, clarify role definitions, and better define the mandate under which transitions occur between emergency and "business as usual' arrangements. MCDEM considers that the Canterbury Earthquake Royal Commission is receiving sufficient advice on these matters. As such, the key points made in this submission concern clarifying how any such improvements are best integrated and implemented within legislation and administrative leadership at the national level.

4.2 Recommendations:

a) Review and amend the Building Act 2004 by extending the "business as usual" provisions for managing 'dangerous and insanitary' buildings to enable the full emergency management of tens and upwards of thousands of structural impacted buildings, regardless of there being a State of Emergency in place under the Civil Defence Emergency Management Act 2002 or not.

b) The administration, standards setting, quality assurance, practice requirements and funding aspects for managing buildings in an emergency are based, as far as practicable, upon the general regulatory and operational arrangements of the building regulatory control management system to enable consistent approaches and seamless transitions.

c) Making clear in mandates and guidance what the objectives and priorities are for managing individual buildings and a stock of buildings at different stages

4.3 MCDEM would be pleased to discuss this submission with the Royal Commission.