

Submission of BCTRAG Agenda Items

Submitted by:	Graeme McVerry	Submitted on:	12/02/2019
On behalf of:	GNS Science		
Risk Title: What is the risk	Inadequate addressing of amenity requirements (i.e., continued operability) following earthquakes. <i>Under the larger theme of post-event functionality, damage control, and building reparability.</i>	Confidential data: Check if communication is to be limited to permanent BCTRAG members	<input type="checkbox"/>
Building Code Clause impacted: If known	B1 Structure - durability <i>(Note for BCTRAG: B1 is correct, but I am uncertain about the title of the clause. There may also be a subclause that is relevant.)</i>		
Potential impact or Harm arising from this Risk Consider the impact this risk may cause if it occurred e.g: - Financial, - Innovation stifled, - Loss of life, - Building damage, - Environmental - Productivity loss - Others....	Many buildings requiring demolition following an earthquake despite satisfying life safety provisions, as for the Christchurch earthquake and, to a lesser extent, the situation in the Wellington CBD after the Kaikoura earthquake. Suggest that strength of earthquake shaking considered for continued operation needs to be increased two to four times from current NZS1170 provisions for SLS1 for IL2 structures, together with limits on interstorey deflection to prevent damage to building services and non-structural components. A further suggestion to address potential criticisms that this may be prohibitively expensive to apply to all buildings is to create a new officially-recognised voluntary class of Enhanced Seismic Performance (ESP) buildings and let the market decide how often they are selected, as with %NBS levels for existing buildings.		
How prevalent is this risk now and in the future Consider: - impacted population - will the risk grow over time with or without intervention	Likely following any moderate to severe earthquake through New Zealand.		
Factors influencing magnitude of risk Consider: - How urgent is addressing the risk to country or sector. - what is the opportunity cost of the risk materialising	Can NZ afford another Christchurch, or even another post-Kaikoura Wellington, not to mention – if nothing is done on the post-event functionality front (both with regards to buildings and infrastructure) – a future post Wellington earthquake Wellington?		

What caused the risk to come to your attention?	
Supporting files attached <ul style="list-style-type: none">- Journal papers- Research	