

Submission of BCTRAG Agenda Items

Submitted by:	Richard London	Submitted on:	24/05/2019
On behalf of:	Building Performance and Engineering		
Risk Title: What is the risk	Defining the use of a building	Confidential data: Check if communication is to be limited to permanent BCTRAG members	<input type="checkbox"/>
Building Code Clause impacted: If known	Inconsistent definition of “use of building” in the Act, building code or compliance documents leading to incorrect categorisation of a building and building performance not be fit purpose.		
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....	<p>As outlined below there are 9 primary ways to categorise a building in the building regulatory system with the BCA’s definition system compromising a 10th.</p> <p>Due to the various different building categorisation systems people may not understand when to apply each categorisation leading to harms arising from:</p> <ul style="list-style-type: none"> - Fire and structural life safety i.e. if required fire suppressant systems are not installed - Amenity for example if incorrect internal fittings are installed, or daylight requirements are not met. - Lack of alignment between the various use categories - There are some gaps where the categories are not keeping up with changes in how buildings are being used (not future proof). - There is some conflict between categories. <p>The building regulatory systems are:</p> <p>Building Act 2004</p> <ol style="list-style-type: none"> 1. Interpretation of building typology or how a building is used i.e. abode, earthquake-prone building, heritage building, household unit etc. (Section 7 of the Building Act 2004) 2. What is a Building and what is not a building. (Section 8 and 9 of the Building Act 2004) 3. Intended use – Buildings must comply with the functional and performance criteria of the Building Code in their intended use. The intended use in relation to a building includes any foreseeable occasional use, and activities undertaken in response to fire or other reasonably foreseeable emergency. (defined term in Section 7 and S16 of the Building Act 2004) <p>Building Code</p> <ol style="list-style-type: none"> 4. A1 Classified Uses determines what Building Code clauses are applicable to each building use. The main risk to this Code clause is that if the Building is incorrectly applied to a building then the performance of the building may not met the requirements for the Building Act 2004. Limits of application xxx 5. A3 Importance Use are used in conjunction with C1-6 XX 6. A2 Interpretation of building typology or how a building is used i.e. back country hut, occupied space, <p>Change of use - Building (Specified Systems, Change the Use, and Earthquake-prone Buildings)</p>		

	<p>Regulations 2005.</p> <p>7. Change of use to determine when a change in a building’s use will require upgrading to meet certain requirements of the Building Act.</p> <p>Compliance Documents</p> <p>8. Risk groups for the C/AS1-7</p> <p>9. Importance levels for Structure in B1/VM1 and NZS1170.0</p> <p>Other locations to consider</p> <p>10. BCAs use the National BCA competency assessment system levels to determine the complexity of the buildings risk. This is based on storeys, risk matrix, and occupant load and split into residential and commercial, and includes 6 categories or building types. (R1-3, C1-3)</p> <p>11. Public buildings as indicated by S118 and schedule 2 of the Building Act 2004</p> <p>12. Other code clauses discuss how a building is used and/or categorises buildings in the performance criteria and/or limits on application further to the classified uses. For example</p> <ul style="list-style-type: none"> • F6 xxx performance criteria refers to risk group A,B,C (which are defined in A2 Interpretation) • G5 xxx in its limits on application refer to early childhood centres and old people’s homes • G2 xx the limit on application refers to Camping grounds <p>13. Licensing classes and building categories for Restricted Building Work and Licensed Building Practitioners (Building Categories 1,2,3)</p> <p>14. Building typologies used in the Acceptable Solutions, Verification Methods and Standards</p> <p>15. Building (Forms) Regulation 2004 refer to “lawfully established use”</p>
<p>How prevalent is this risk now and in the future</p> <p>Consider: - impacted population - will the risk grow over time with or without intervention</p>	<p>The risk to A1 Classified Uses is that it does not currently reflect the way people use buildings now and certain uses now fall between the gaps of current uses and the application of the Building Code can be misapplied.</p> <p>Types of buildings are between existing classified uses</p> <ul style="list-style-type: none"> - Temporary seasonal accommodation - Holiday accommodation - Inter-generational living (social cohesion) - Shared accommodation (no social cohesion) <p>Risk for Change of use - Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005.</p> <p>Existing and new buildings the risk of not applying the correct use when a change of use is required under S114 and S115 of the Building Act 2004 is the ANARP (as near as reasonably practicable) assessment not being undertaken, or no upgrades to bring the building up to comply ANARP with the current Building Code for Structure, means of escape and spread of fire, protection of other property etc.</p> <p>Life risk (Fire and Structure)</p> <p>The requirements for fire safety systems for a building are defined at the Importance level and risk group level. The risk groups are quite coarse and do not capture all the different types of classifications of buildings that apply under different uses</p> <p>Several types of occupancies currently sit between the definitions currently provided across all regulations and compliance documents.</p> <ul style="list-style-type: none"> • AirBnb type of accommodations

	<ul style="list-style-type: none"> • Apartments for independent living of elderly. <p>Structural risk</p> <p>Incorrect categorisation of importance level and building typology for structural design can affect the seismic design and loadings within a building</p> <p>Amenity risk</p> <p>Loss of amenity is a risk when applying the uses and building typologies to a building or how a space within the building is used and the requirements of the Building Code. Habitable space is a term used in G6</p> <p>This also relates to G6 Airborne and Impact Sound and G7 Natural light in relation to household units.</p>
<p>Factors influencing magnitude of risk</p> <p>Consider:</p> <ul style="list-style-type: none"> - How urgent is addressing the risk to country or sector. - what is the opportunity cost of the risk materialising 	<p>The main risk in this area is the application and confusion in this area and that the risks to the buildings based on risk are not being captured correctly.</p>
<p>What caused the risk to come to your attention?</p>	<p>Determinations, gaps in A1 Classified uses and inconsistencies between the Building Code, Building Act and Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005.</p>
<p>Supporting files attached</p> <ul style="list-style-type: none"> - Journal papers - Research 	<p>https://www.building.govt.nz/assets/Uploads/resolving-problems/determinations/2019/2019-005.pdf</p> <p>https://www.building.govt.nz/managing-buildings/change-of-use-and-alterations/</p> <p>http://www.legislation.govt.nz/regulation/public/1992/0150/latest/DLM162576.html#DLM6632400</p> <p>http://www.legislation.govt.nz/regulation/public/1992/0150/latest/DLM162576.html#DLM4417717</p> <p>http://www.legislation.govt.nz/regulation/public/2005/0032/latest/DLM313979.html</p>