Christchurch City Council

UNDER	**THE COMMISSIONS OF INQUIRY ACT 1908**
IN THE MATTER OF	**ROYAL COMMISSION OF INQUIRY INTO BUILDING FAILURE CAUSED BY CANTERBURY EARTHQUAKES** **KOMIHANA A TE KARAUNA HEI TIROTIRO I NGĀ WHARE I HORO I NGĀ RŪWHENUA O WAITAHA**

SUBMISSIONS ON THE LEGAL REQUIREMENTS FOR EARTHQUAKE PRONE BUILDINGS AND RELATED MATTERS (ISSUES 3(b) TO 3(d))

DATES OF HEARING: WEEKS BEGINNING 7 AND 14 NOVEMBER 2011

Legal Services Unit, c/o 28 Hereford Street, Christchurch 8013
P O Box 73013, Christchurch 8154
Telephone (03) 941 8999

1. Introduction

1.1. These submissions are made by the Christchurch City Council (**the Council**) and address some but not all matters that have been identified by the Royal Commission as issues for the hearings during the weeks of 7 and 14 November 2011. The following matters for consideration were contained in an email from the Commission dated 8 September 2011:

> "*The legal requirements for buildings that are "earthquake prone" under section 122 of the Building Act 2004, including:*
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> - *the buildings that are, and those that should be, treated by the law as "earthquake prone", and*
> - *existing buildings that are or should be required by law to meet a defined minimum proportion of the seismic standards for the design, construction and maintenance of new buildings, and*
> - *the enforcement of legal requirements for such buildings including the period allowed for compliance.*
>
> *The requirements for existing buildings that are not "earthquake prone" but do not meet current legal and best practice requirements for the design, construction and maintenance of new buildings, including whether, to what extent, and over what period, they should be required to meet those requirements.*
>
> *Existing and new methods for the seismic strengthening or "retro-fitting" of existing unreinforced masonry buildings.*
>
> *The desirability of immediate action in respect of restraining parapets, chimneys, and other high-hazard elements.*
>
> *The respective roles of central and local government in respect of earthquake-prone buildings and their seismic strengthening*."

1.2. By way of contrast, the Commission's Interim Report listed 6 sub-issues under Issue 3 (page 18). In terms of that list, it is not intended to address Issues 3(a), 3(e) and 3(f) in these submissions. To the extent that the Commission's email of 8 September 2011 expands upon the matters in Issue 3, these submissions will however comment on those additional matters where relevant.

1.3. The Council does however have a specific interest in Issue 3(e), which is as follows:

> "*The legal and best practice requirements for the assessment of and for remedial work carried out on buildings after any earthquake, having regard to lessons from the Canterbury earthquakes.*"

1.4. The Council anticipates this matter will be the subject of later hearings and it intends to provide submissions on this topic.

1.5. In relation to the number of the remaining matters falling within Issue 3, it has not been possible to fully brief the elected members to establish a formal Council view.

1.6. In particular the Council is yet to consider its response to the report titled *The Performance of Unreinforced Masonry Buildings in the 2010-2011 Canterbury Earthquake Swarm* by Associate Professor Jason Ingham and Professor Michael Griffith: ENG.ACA.001F (**the URM Report**), and the two peer review reports prepared by Mr Fred Turner of the Seismic Safety Commission and Mr Bret Lizundia of Rutherford & Chekene. However, some comment is made about the recommendations in section 7 of the URM Report in the context of responding to the Commission's recommendations in the Interim Report.

1.7. It is also noted that at least one report relevant to Issue 3 is still pending and some others are not as yet available on the Commission's website. If new matters arise as a result of that information, then the Council may wish to make further submissions on those matters.

1.8. The Council is currently committed to completing its statutory responsibilities in relation to the central city plan and will report to the Minister in the week ending 23 December 2010. It is however conscious that the Commission will wish to receive submissions from it on a variety of matters and is continuing to commit substantial resources to these matters.

1.9. In these circumstances, the Council seeks the opportunity to make further submissions at a later time during the Commission's hearings and to potentially provide evidence on some topics under Issue 3.

1.10. The matters commented upon in these submissions are as follows:

(a) A review of the legal requirements for buildings that are earthquake prone under section 122 of the Building Act.

(b) The legal requirements for buildings that are not earthquake prone but do not meet current code requirements.

(c) The extent and period over which buildings that are not earthquake prone should be required to meet current requirements.

(d) Existing and new methods for seismic strengthening of URM buildings.

(e) The desirability of immediate action in respect of restraining high-hazard elements.

(f) The respective roles of central and local governments.

2. Legal Requirements for Buildings that are Earthquake-prone under s122 of the Building Act 2004 (Issue 3(b))

Legislative history – earthquake-prone buildings

2.1. The Commission has received information from the Department of Building and Housing (**DBH**) about the legislative background and relationship between building regulation, structural design and standards, and building methods in New Zealand, since the Napier earthquake. (In particular see paragraphs 2.1 and 4.4 of the DBH *Briefing to the Royal Commission of Inquiry into building failure caused by the Canterbury Earthquakes about the building regulatory framework* (ENG.DBH.0002), and Exhibit A to that Report (ENG.DHB 0004A.4).)

2.2. The Council is currently preparing information for the Royal Commission on its building bylaws that were adopted between 1935 and the enactment of the Building Act 1991, with particular reference to seismic and related structural codes and standards. This information needs to be considered in light of the empowering legislation in existence from time to time.

2.3. These submissions will now review the changes in relation to earthquake prone buildings from the provisions in the Building Act 1991 to the Building Act 2004, including the related Building (Specified Systems, Change of use, and Earthquake-prone Buildings) Regulations 2005.

2.4. The applicable provisions from both Acts are set out in Appendix A to these submissions. The primary differences between the two Acts are highlighted in the following table:

Differences	Building Act 1991	Building Act 2004
Type of buildings could be considered earthquake-prone	Unreinforced masonry buildings likely to suffer catastrophic collapse in a moderate earthquake.	All buildings, not just unreinforced masonry, likely to collapse in a moderate earthquake.
Definition of moderate earthquake	Found in section 66. Buildings with a strength less than 50% of 1965 Model Building Bylaw standard.	Found in Regulations. Buildings with a strength less than 33% of current code requirements for a new building.
Enforcement of earthquake-prone buildings	Could only put up a hoarding/fence around a building or issue a notice requiring work to reduce or remove the danger. (Ability to do work on buildings if owner defaults is the same in each Act.)	As well as putting up hoarding and issuing work notice, a territorial authority can also issue notice prohibiting entry to a building. (The immediate danger provisions are the same in each Act.)
Objections in respect of earthquake-prone buildings	Objection could be lodged against notice. If territorial authority re-affirmed notice after hearing, the territorial authority had to apply to the District Court to confirm the notice. District Court appointed 2 assessors, and its decision could be appealed to High Court on points of law.	No separate/special objection process provided for (unless TA voluntarily includes it in a policy). Decisions by territorial authorities to issue a work notice can be the subject of a determination to the DBH, and that decision can then be appealed to the District Court.
Policies on earthquake-prone buildings	No provisions in the Act requiring a policy.	Territorial authorities must adopt polices on dangerous, earthquake-prone and insanitary buildings that set out the

		approach and priorities in relation to those buildings, as well as how the approach is applied to heritage buildings.

2.5. There were a number of issues with the implementation of the provisions of the Building Act 1991 relating to earthquake-prone buildings. If a territorial authority issued a notice under section 66, and there was an objection in respect of the notice, it would result in a formal District Court hearing process with consequential cost and delay. In addition, the earthquake-prone building "benchmark" relied on a standard that was already outdated (section 66(4):- "… New Zealand Standard Model Building Bylaw NZS 1900, Chapter 8: 1965 (notwithstanding its revocation) …").

2.6. Some improvements in the provisions relating to earthquake-prone buildings are contained in the Building Act 2004. The requirement for an earthquake prone building policy has meant that a TA's approach to performing its functions and priorities in respect of earthquake prone buildings has had to be documented and subjected to the special consultative procedure under section 83 of the Local Government Act 2002. However, the 2004 Act has not materially increased the extent of a TA's enforcement powers.

2.7. Although the "benchmark" for a building being earthquake-prone was changed with the 2004 Act, and improved by the requirement to assess a building against current design standards instead of a fixed 1965 code, a level of 33% of the current standard (the "one-third rule", as it is described in the URM Report) was ultimately adopted for an earthquake-prone building in the Building (Specified Systems, Change of use, and Earthquake-prone Buildings) Regulations 2005.

2.8. There is no background in the explanatory note, Select Committee report, or in Hansard, as to why the "one-third rule" was adopted instead of a higher level. The setting of a higher standard would clearly have meant more buildings would be considered earthquake-prone.

2.9. The NZSEE released a publication in June 2006 (**Report**) that made a comment on the 33% code requirement.[1] The Report noted that:

> "*The level of 'one-third' as strong … is considered a reasonable balance (for the present time) between imposing a requirement to upgrade all non-complying buildings … and the previous position where only [unreinforced masonry] buildings were addressed*."[2]

2.10. The Report also considered that "*the new requirements recognise the total impracticality of bringing all existing buildings up to the standard of new buildings*".[3]

2.11. However, the Report generally categorised buildings that were less than 67% code as "moderate risk", and recommended that strengthening to 67% code should be the minimum requirement for all existing buildings. It described buildings that fall between 34% to 66% code as "*acceptable only in exceptional circumstances*".[4] In the Council's Earthquake-prone Buildings Policy, adopted on 10 September 2010, the Council included provisions to encourage building owners to strengthen their earthquake-prone buildings to at least 67% of current code (section 2.3.3, page 6).

2.12. The Council is yet to consider whether the definition of earthquake prone buildings should be changed, so that if a building is less than 67% of code, it will be regarded earthquake-prone, or whether alternatively, other changes should be made to the legislation so that all buildings must ultimately be strengthened to at least 67% of current code.

Current provisions in the Building Act 2004 relating to earthquake-prone buildings

2.13. Some information on the current legislative requirements for earthquake-prone buildings is set out in section 8.2 of the Council's *Report Into Building Safety Evaluation Processes In The Central Business District Following The 4 September 2010 Earthquake* (**the September report**). Appendix A in the

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[1] *Assessment and Improvement of the Structural Performance of Buildings in Earthquakes: Recommendations of a NZSEE Study Group on Earthquake Risk Buildings*, NZSEE, June 2006.
[2] Ibid, at [2-2].
[3] Ibid, at [2-3].
[4] Ibid, at [2-14].

September Report sets out in full the relevant provisions of the Building Act 2004 on earthquake-prone buildings.

The buildings that are, and those that should be, treated by the law as "earthquake prone" Issue 3(b)A)

2.14. As already mentioned, a building that is earthquake-prone for the purposes of the Building Act 2004 is one with a seismic performance strength that is less than 33% of the design standards (the one-third rule) for a new building that would be built on the same site.

The extent to which existing buildings are or should be, required by law to meet the requirements for use, design, construction and maintenance of new buildings (Issue 3(b)B)

2.15. This issue is discussed in a preliminary way in section 3 below.

The enforcement of legal requirements (for earthquake-prone buildings including the period allowed for compliance) (Issue 3(b)C)

2.16. The enforcement powers for earthquake prone buildings are contained in sections 124-130 of the Building Act 2004. The manner in which a council will perform these functions, including enforcement, must currently be set out in the earthquake-prone buildings policy required by section 131 of the Act. The provisions of a policy are not directly enforceable. Enforcement is achieved under section 124, or, where there is an immediate danger, under section 129.

2.17. The September report discusses these requirements, and also the Council's earthquake-prone buildings policy (see section 8.2, and pages 38-41 in particular).

Period of compliance

2.18. Section 124(1)(c) of the Building Act 2004 provides that a notice must give not less than 10 days for a building owner for compliance. In the case of an earthquake-prone building, the requirement in the notice will be to reduce or

remove the danger so that the building is no longer earthquake-prone. This is helpfully discussed in a recent DBH determination *The exercise of the powers of an authority to issue a notice under section 124 of the Act regarding a building considered to be earthquake prone* (DBH Determination 2010/133, 20 December 2010).

2.19. The period that is allowed for strengthening a building is addressed by each TA individually in its policy. The Council's policy currently provides timeframes of between 15-30 years, which will commence on 1 July 2012, within which earthquake-prone buildings must be strengthened. Notices would need to be issued under section 124(1)(c) if formal action was required to enforce the policy requirements.

2.20. However, if significant alterations (as defined) are being made to an earthquake-prone building, or an earthquake-prone building is damaged in an earthquake and requires repairs, the Council will require strengthening to be carried out at the same time. Again, this requirement would need to be enforced through the issue of section 124(1)(c) notices if necessary.

2.21. Other councils provide for different periods of compliance, and there is no set time frame by which all earthquake-prone buildings in New Zealand will be upgraded. A summary of certain aspects of earthquake-prone policies of territorial authorities throughout New Zealand is available on the DBH website.

2.22. The Council notes that the URM Report does not make any recommendations regarding periods for compliance, except to the extent it suggests that the stages 1 and 2 as referred to in recommendation 3 should be implemented "*as soon as possible for all URM buildings*". This is also reflected in the Commission's Interim Report at page 39, which states that Recommendations 5 to 7 should be implemented as soon as possible.

2.23. This is not a matter that the Council can make detailed submissions on at this time, but is a matter of importance especially given that the URM Report in section 7 (at page 114) states that "*recommendation 4 should be a national requirement*". Recommendation 4 relates to the authors' proposal that all URM buildings should go through the first two stages of

building improvements. The Council wishes to make submissions at a later date on this topic.

Level of strengthening that can be enforced

2.24. There is a lack of clarity in the current legislation as to what level of strengthening a TA can require or enforce in a section 124(1)(c) notice. The Council, through its own policy, aims to have building owners strengthen their buildings to 67% of the new building standard.

2.25. The competing arguments as to the possible interpretation on what level of strengthening can be required by a council under section 124, are set out in Appendix B of the Council's submissions.

2.26. If the level at which a building is considered earthquake-prone was to be increased to 67% of code (and the Council is yet to form a view on this topic), the immediate interpretation issue outlined above may become less important. However, this still would potentially leave an issue as to whether an earthquake prone policy could stipulate for an even higher level of strengthening. It is the Council's view that in the interests of certainty, the level of strengthening should be a national requirement rather than being left to individual earthquake prone policies.

3. Requirements for buildings that are not as a matter of law earthquake-prone but are not up to current code/design requirements (Part of Issue 3(c))

3.1. The requirements for existing buildings that are not earthquake-prone are discussed in the DBH briefing report (ENG.DBH.0002). The Council's September report also mentions some of the relevant sections in the Building Act 2004 related to the upgrading of existing buildings.

3.2. There is, however, a separate issue that is not discussed fully in either report. There is no *general* legal requirement in the Building Act 2004, or

elsewhere, for a building owner to upgrade a building to current building standards.[5]

3.3. Section 8 of the Building Act 1991 specifically provided that:

"*Except as specifically provided to the contrary in this Act, nothing in this Act shall be read as requiring any building, the construction of which was completed or commenced before the coming into force of Part 6 of this Act, to meet the requirements of the building code*."

3.4. No equivalent provision was carried over to the Building Act 2004.

3.5. A territorial authority only has limited ability to require upgrading under the 2004 Act:

3.5.1. when a building is altered or repaired under section 112 (the term "alter" includes "repair"); or

3.5.2. there is a change of use for the building under section 115; or

3.5.3. when a building has deteriorated to such a state that the building is dangerous, earthquake-prone, or insanitary, the TA can take enforcement action under section 124 of the Building Act 2004.

3.6. If a building is only being altered or repaired, then no structural upgrading can be required unless the building is also earthquake-prone and the Council's policy provides for immediate strengthening when an alteration is done. Section 112 only requires upgrading in respect of means of escape from fire and access and facilities for persons with disabilities; the rest of the building has to continue to comply with the rest of the Building Code to the same extent as before the upgrade.

3.7. If a building is dangerous or insanitary, then even if enforcement action is taken by the Council, structural *improvements* to the building will not

[5] There is also no requirement on an owner to regularly maintain their buildings, unless there are specified systems in the building that require an annual building warrant of fitness (see sections 100-111 of the Building Act 2004) .

necessarily be required in order to reduce or remove the particular danger or insanitary issue with the building.

3.8. If a building is subject to the change of use provisions, then structural upgrading can be required. But, the change of use provisions have been drafted in such a way that only changes of use recognised by the regulations are relevant. That means in some situations even though structural upgrading should be undertaken, it will not occur. Some examples are attached as Appendix C of these submissions.

4. Whether, to what extent and over what period should buildings that are not earthquake-prone be required to meet current requirements (Part of Issue 3(c))

4.1. This is another important matter that is yet to be considered by the Council. It is also preferable that this matter is not considered in isolation from other possible related reforms. As noted above, the Council would like the opportunity to make further submissions on these issues to the Commission at a later date.

4.2. Related to this question, is the issue whether any upgrading requirements for buildings that are not earthquake-prone (as defined), should apply to all buildings, or whether there should be a similar separation of residential from commercial, as is currently found in the earthquake-prone building definition. Alternatively should only public use buildings be upgraded?

4.3. Another consideration is the manner of enforcement of upgrading requirements for such buildings. This in turn raises the issue whether this should be governed by an extended earthquake-prone policy at a local level, through a national standard, or by some combination of these approaches. There may also be merit in a regular building "check" system, possibly by extending the current building warrant of fitness requirements to structural checks.

4.4. The issues raised by the Royal Commission and these further considerations will be raised with elected members and a formal Council

view reached for the purposes of additional submissions to the Commission.

5. Existing and new methods for seismic strengthening or "retro-fitting" of URM Buildings (Royal Commission email: 8/9/11)

5.1. This matter is dealt with in section 4 of the URM Report and the two peer review reports. The Council is yet to undertake any detailed technical review of the issues, but is currently providing information to the Commission to assist its further consideration of these issues, particularly in relation to the retro-fitting of heritage buildings.

6. The desirability of immediate action in respect of restraining parapets, chimneys, and other high-hazard elements (Royal Commission email: 8/9/11)

6.1. This matter is considered in the URM Report and the two peer reviews of that report. It is also subject to recommendations 6-8 in the Commission's Interim Report (page 39).

6.2. Again the Council is to yet form a view on this issue both from a technical and policy perspective. However, an approach targeting specific dangerous features first was instituted in a basic form in Wellington after the 1942 earthquake, when many parapets and similar items were removed from masonry buildings. A similar approach was adopted in Christchurch during the 1970s and 1980s and resulted in the removal of a number of parapets and other potentially dangerous features on buildings.

6.3. While the Council appreciates that the Commission's Interim Report has already made recommendations relating to this issue, in the Council's submission the desirability of immediate action in respect of the building elements that are located at height, needs to be considered in a wider context. The Council considers that this proposal raises a number of matters that it would like to make further submissions on in due course. They include the matters set out below.

Legislative and regulatory

6.4. There are some potentially complex issues in terms of how the necessary legislative changes would be implemented and how "staging" would be enforced from a practical engineering, timing, and construction point of view. These issues are relevant for all territorial authorities, but are of particular concern for the Council, which has to confront the question of future seismic upgrading against a background of having a large number of URM buildings that are already damaged by the series of earthquakes.

Economic and financial

6.5. The Council is concerned with the economic consequences of the implementation of such reforms relating to URM buildings and, in particular, its effect on the economic recovery of Christchurch.

Planning and heritage

6.6. Again, an important factor for the Council is the potential impact of any legislative reforms in terms of preserving heritage and amenity, particularly in the CBD, and in respect of related implications in terms of the draft Central City Plan.

7. Respective roles of Central and Local Government (Issue 3(d) - in part)

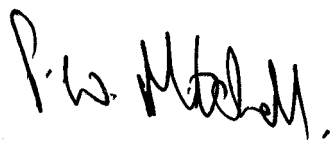
7.1. This topic potentially has a very wide scope, and the Council would like to make submissions to the Commission at a later date. There is of course overlap with other sub-issues within Issue 3, but the Council anticipates that its future submissions will include:

(a) whether there should be a comprehensive national policy or standard covering all the matters currently subject to a TA's earthquake-prone policy, or whether this would only cover the immediate actions required for dealing with falling hazards;

(b) related to (a), what level of local decision making and policy making should remain in respect of the upgrading of earthquake-prone and earthquake-risk buildings;

(c) to what extent should the Building Act powers in relation to earthquake prone buildings be subject to the requirements of other legislation (ie the Resource Management Act 1991);and

(d) where the responsibility for enforcement will fall.



25 October 2011

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Peter Mitchell Date
General Manager
Regulation and Democracy Services
Christchurch City Council

Appendix A – Earthquake-prone building provisions from the Building Act 1991 and the Building Act 2004

Building Act 1991

66 Buildings which are deemed to be earthquake prone

(1) Subject to subsection (2) of this section, a building shall be deemed to be earthquake prone for the purposes of this Part of the Act if, having regard to its condition and to the ground on which it is built and because of its construction being either wholly or substantially of unreinforced concrete or unreinforced masonry, the building will have its ultimate load capacity exceeded in a moderate earthquake and thereby would be likely to suffer catastrophic collapse causing bodily injury or death to persons in the building or to persons on any other property or damage to any other property.

(2) Subsection (1) of this section shall not apply to any building which is used wholly or principally for residential purposes, unless the building is of 2 or more storeys and contains 3 or more household units.

(3) Without limiting its powers under Part 5 of this Act, a territorial authority, on being satisfied that any building is a building deemed to be earthquake prone, may—

(a) Put up a hoarding or fence so as to prevent persons approaching nearer than is safe; and

(b) Except as provided in section 74(1)(b) of this Act, give notice in accordance with section 71 of this Act requiring work to be done on the building to reduce or remove any danger within a time specified in the notice, being not less than 10 days.

(4) For the purposes of this section, in relation to any building that is deemed to be earthquake prone,—

Masonry means any building work in units of burnt clay, concrete, or stone laid to a bond in and joined together with mortar:

Moderate earthquake means an earthquake that would subject a building to seismic forces one-half as great as those specified in New Zealand Standard Model Building Bylaw NZS 1900, Chapter 8: 1965 (notwithstanding its revocation) for the zone (as described in that New Zealand Standard) in which the building is situated:

Unreinforced masonry means masonry classified as unreinforced by New Zealand Standard Model Building Bylaw NZS 1900, Chapter 9.2: 1964 (notwithstanding its revocation).

67 Objections on earthquake prone buildings

(1) Within 10 days after the notice is given under section 66(3)(b) of this Act, the owner may object in writing to the territorial authority against the requirements of the notice, and the notice shall thereupon be deemed to be suspended pending the determination of the objection, or, where application is made to the Court to confirm the notice, pending the decision of the Court.

(2) Where any such objection is received by the territorial authority, the territorial authority shall, as soon as practicable, inquire into and dispose of the objection.

(3) No objection shall be dismissed unless reasonable notice of the date and time when and the place where it is to be considered has been given to the objector, who, if present at the appointed time and place, shall be entitled to be heard and submit evidence and call witnesses in support of his or her objection; and any objector may be represented at the hearing by counsel or otherwise.

(4) Where on inquiry into the objection the territorial authority reaffirms its requirements, the territorial authority shall apply to a District Court for an order confirming the notice given by the territorial authority.

68 Hearing by District Court

(1) The District Court hearing an application under section 67(4) of this Act shall hear the application with the assistance of 2 assessors, to be appointed by the Court for the purposes of that application from a panel of appropriate persons from time to time appointed by the Authority and published by the Authority in the Gazette; and the sole function of the assessors shall be to assist the Court in determining the application, and the application shall be determined by the Court alone.

(2) If any assessor dies or is for any reason unable to act or to continue to act, another assessor may be appointed to act in the assessor's place, whether or not the hearing of the application has commenced.

(3) There shall be paid to assessors, out of money appropriated by Parliament for the purpose, remuneration by way of fees or allowances and travelling allowances or expenses in accordance with the Fees and Travelling Allowances Act 1951, and that Act shall apply accordingly as if those assessors were members of a statutory Board within the meaning of that Act.

(4) On the hearing of the application, the Court may—

(a) Confirm the notice without modification; or

(b) Confirm the notice subject to modification; or

(c) Extend the time specified in the notice for removing the danger; or

(d) Set aside the notice.

69 Appeal to High Court

(1) Where any party to the proceedings is dissatisfied with any determination of a District Court on any application under section 67 of this Act as being erroneous in point of law, the party may appeal to the High Court for the opinion of that Court on a question of law only.

(2) Part 4 of the Summary Proceedings Act 1957, so far as it relates to appeals by way of case stated on a question of law only, shall apply, so far as it is applicable, to every appeal under this section.

(3) The decision of the High Court on any appeal under this section shall be final.

(4) The operation of the order against which an appeal is made under this section shall be suspended until the appeal is determined.

70 Measures to avert immediate danger or rectify insanitary conditions

(1) If, arising from the state of any building,—

(a) Immediate danger to the safety of people is apprehended in terms of section 64 or section 66 of this Act; or

(b) Immediate action for the rectification of insanitary conditions is necessary—

the chief executive of the territorial authority may, by warrant under the chief executive's hand, cause any measures to be taken which are necessary in the chief executive's judgement to secure the safety of the public or to rectify the insanitary conditions; and the territorial authority may recover the costs thereof from the owner, and the amount recoverable by the territorial authority shall be a charge on the land on which the building is situated.

(2) Where a chief executive issues a warrant under subsection (1) of this section, the territorial authority, upon completion of the measures specified in the warrant, shall apply to a District Court for confirmation of the warrant.

(3) On the hearing of an application under this section, the District Court may—

(a) Confirm the warrant without modification; or

(b) Confirm the warrant subject to modification; or

(c) Set aside the warrant.

(4) A territorial authority shall not be under any liability arising from the issue, in good faith, of a warrant pursuant to subsection (1) of this section.

71 Notices in respect of dangerous or insanitary buildings

(1) Without limiting section 87 of this Act, any notice given by a territorial authority under section 65 or section 66 of this Act shall be in writing fixed to the building concerned; and a copy of the notice shall be given to—

(a) The owner of the building; and

(b) The occupier of the building; and

(c) Every person having an interest in the land on which the building is erected under any mortgage or other encumbrance, being an interest registered under the Land Transfer Act 1952; and

(d) Every person claiming an interest in the land which is protected by a caveat lodged under section 137 of the Land Transfer Act 1952 and for the time being in force; and

(e) Any statutory organisation that has authority to classify land or buildings for any purpose, where that land or building has been so classified.

(2) Notwithstanding the other provisions of this section, if any such notice is fixed on the building, that notice shall not be invalid solely because a copy of it has not been given to any or all of the persons mentioned in this section.

Building Act 2004 (original wording, not the sections as they have been amended by the Canterbury Earthquake (Building Act) Order 2011)

122 Meaning of earthquake-prone building

(1) A building is earthquake prone for the purposes of this Act if, having regard to its condition and to the ground on which it is built, and because of its construction, the building—

(a) will have its ultimate capacity exceeded in a moderate earthquake (as defined in the regulations); and

(b) would be likely to collapse causing—

(i) injury or death to persons in the building or to persons on any other property; or

(ii) damage to any other property.

(2) Subsection (1) does not apply to a building that is used wholly or mainly for residential purposes unless the building—

(a) comprises 2 or more storeys; and

(b) contains 3 or more household units.

124 Powers of territorial authorities in respect of dangerous, earthquake-prone, or insanitary buildings

(1) If a territorial authority is satisfied that a building is dangerous, earthquake prone, or insanitary, the territorial authority may—

(a) put up a hoarding or fence to prevent people from approaching the building nearer than is safe:

(b) attach in a prominent place on, or adjacent to, the building a notice that warns people not to approach the building:

(c) give written notice requiring work to be carried out on the building, within a time stated in the notice (which must not be less than 10 days after the notice is given under section 125), to—

(i) reduce or remove the danger; or

(ii) prevent the building from remaining insanitary.

(2) This section does not limit the powers of a territorial authority under this Part.

(3) A person commits an offence if the person fails to comply with a notice given under subsection (1)(c).

(4) A person who commits an offence under this section is liable to a fine not exceeding $200,000.

125 Requirements for notice given under section 124

(1) A notice given under section 124(1)(c) must—

(a) be fixed to the building concerned; and

(b) state whether the owner of the building must obtain a building consent in order to carry out the work required by the notice.

(2) A copy of the notice must be given to—

(a) the owner of the building; and

(b) an occupier of the building; and

(c) every person who has an interest in the land on which the building is situated under a mortgage or other encumbrance registered under the Land Transfer Act 1952; and

(d) every person claiming an interest in the land that is protected by a caveat lodged and in force under section 137 of the Land Transfer Act 1952; and

(e) any statutory authority, if the land or building has been classified; and

(f) the New Zealand Historic Places Trust, if the building is a heritage building.

(3) However, the notice, if fixed on the building, is not invalid because a copy of it has not been given to any or all of the persons referred to in subsection (2).

126 Territorial authority may carry out work

(1) A territorial authority may apply to a District Court for an order authorising the territorial authority to carry out building work if any work required under a notice given by the territorial authority under section 124(1)(c) is not completed, or not proceeding with reasonable speed, within—

(a) the time stated in the notice; or

(b) any further time that the territorial authority may allow.

(2) Before the territorial authority applies to a District Court under subsection (1), the territorial authority must give the owner of the building not less than 10 days' written notice of its intention to do so.

(3) If a territorial authority carries out building work under the authority of an order made under subsection (1),—

(a) the owner of the building is liable for the costs of the work; and

(b) the territorial authority may recover those costs from the owner; and

(c) the amount recoverable by the territorial authority becomes a charge on the land on which the work was carried out.

129 Measures to avoid immediate danger or to fix insanitary conditions

(1) This section applies if, because of the state of a building,—

(a) immediate danger to the safety of people is likely in terms of section 121 or section 122 or section 123; or

(b) immediate action is necessary to fix insanitary conditions.

(2) The chief executive of a territorial authority may, by warrant issued under his or her signature, cause any action to be taken that is necessary in his or her judgment to—

(a) remove that danger; or

(b) fix those insanitary conditions.

(3) If the territorial authority takes action under subsection (2),—

(a) the owner of the building is liable for the costs of the action; and

(b) the territorial authority may recover those costs from the owner; and

(c) the amount recoverable by the territorial authority becomes a charge on the land on which the building is situated.

(4) The chief executive of the territorial authority and the territorial authority are not under any liability arising from the issue, in good faith, of a warrant under subsection (2).

130 Territorial authority must apply to District Court for confirmation of warrant

(1) If the chief executive of a territorial authority issues a warrant under section 129(2), the territorial authority, on completion of the action stated in the warrant, must apply to a District Court for confirmation of the warrant.

(2) On hearing the application, the District Court may—

(a) confirm the warrant without modification; or

(b) confirm the warrant subject to modification; or

(c) set the warrant aside.

(3) Subsection (1) does not apply if—

(a) the owner of the building concerned notifies the territorial authority that—

(i) the owner does not dispute the entry into the owner's land; and
(ii) confirmation of the warrant by a District Court is not required; and

(b) the owner pays the costs referred to in section 129(3)(a).

131 Territorial authority must adopt policy on dangerous, earthquake-prone, and insanitary buildings

(1) A territorial authority must, within 18 months after the commencement of this section, adopt a policy on dangerous, earthquake-prone, and insanitary buildings within its district.

(2) The policy must state—

(a) the approach that the territorial authority will take in performing its functions under this Part; and

(b) the territorial authority's priorities in performing those functions; and

(c) how the policy will apply to heritage buildings.

132 Adoption and review of policy

(1) A policy under section 131 must be adopted in accordance with the special consultative procedure in section 83 of the Local Government Act 2002.

(2) A policy may be amended or replaced only in accordance with the special consultative procedure, and this section applies to that amendment or replacement.

(3) A territorial authority must, as soon as practicable after adopting or amending a policy, provide a copy of the policy to the chief executive.

(4) A territorial authority must complete a review of a policy within 5 years after the policy is adopted and then at intervals of not more than 5 years.

(5) A policy does not cease to have effect because it is due for review or being reviewed.

Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005

7 Earthquake-prone buildings: moderate earthquake defined

For the purposes of section 122 (meaning of earthquake-prone building) of the Act, moderate earthquake means, in relation to a building, an earthquake that would generate shaking at the site of the building that is of the same duration as, but that is one-third as strong as, the earthquake shaking (determined by normal measures of acceleration, velocity, and displacement) that would be used to design a new building at that site.

Appendix B - The competing arguments as to the possible interpretation on what level of strengthening can be required by a council under section 124

(A) Strengthen the building to the level that it can no longer be defined as earthquake-prone under section 122 of the Act

(1) This interpretation emphasises the definition of an earthquake-prone building in section 122, and is perhaps the most logical and straightforward interpretation. If a building is strengthened so that it can no longer be defined as earthquake-prone, then there would no longer be a building that a council could take any enforcement action in respect of, under section 124. That means strengthening of a building, so long as it brings it above 33%, should be sufficient to comply with the requirements of section 124 to reduce or remove the danger.

(2) Although Determination 2010/133 tends to suggest this is the correct interpretation, the issue of the level of strengthening was not one of the matters to be determined, and so it did not need to finally decide the issue.

(B) The level of strengthening required by the words "reduce or remove the danger" is not a precise percentage and will vary according to the characteristics of the particular building and the local conditions. (The level of strengthening is, however, likely to be greater than just ensuring the building is no longer earthquake-prone.)

(3) The words "reduce or remove the danger" are given more emphasis with this interpretation. It requires the danger to be reduced or removed more than in a minimal or insignificant way. What is sufficient to reduce or remove the danger will be a factual matter to be determined taking into account the particular circumstances of the building, and the nature and effect of the proposed remedial work on the performance of the building.

(4) Parliament used words to describe the level of strengthening required under section 124 that are different to the test used to define when a building is earthquake-prone (section 122) or what aspects of a building must be upgraded and to what extent (sections 112 and 115).

(5) Any alterations to improve the structural performance of a building will require a building consent and such work must fully comply with the building code. Where the structural performance of a building element is being upgraded, the whole of the element (ie, a wall, floor, roof or foundation etc) may need to be upgraded. This type of strengthening work does not lend itself to a precise requirement that a building be strengthened to a particular percentage of the strength of a new building.

(C) Strengthen the building to as nearly as reasonably practicable with the Building Code

(6) This interpretation aligns more with the requirements of sections 112 and 115 of the Act. It would require a balancing of the costs of complying as nearly as reasonably practicable with the Building Code against the benefits of improving the structural performance of the building to that level. This is essentially the approach of the New Zealand Society for Earthquake Engineering (NZSEE), which regards meeting 67% of current code as meeting the "as nearly as reasonably practicable" test.

(7) In a manner similar to the second interpretation above, this approach relies on interpreting the Act in a manner that allows territorial authorities to give full effect to their earthquake-prone building policies in combination with the requirements of section 124(1)(c). This approach provides for a substantial improvement in the strength of a building, and a reduction or removal of the danger because:

- The earthquake risk of a building that is at 67% of the strength of a new building is 3 times that of a new building, whereas the risk of a building that is 33% the strength of a new building standard is 20 times that of a new building.

- All buildings that are less than 67% are still a considerable risk, and therefore still a danger.

(D) Strengthen the building so it fully complies with the code

(8) This interpretation involves not reading section 17 as being subject to the earthquake-prone building requirements. Section 17 requires all building work to comply with the Building Code "to the extent required by this Act". Any strengthening work carried out would therefore have to comply with the Building Code fully, and ignore anything in sections 112, 115, and 124. This interpretation is the most difficult to justify, as the words in section 17, "*to the extent required by this Act*" is more likely to mean the other sections must be considered and 100% compliance with the Code is not required in any of those situations.

Appendix C – Examples of Building use changes that are not a formal "change of use" under the Building Act 2004 and its regulations

(1) The purpose of determining whether there is a change of use under the Building Act is to determine whether the building must be upgraded in various respects including the structural performance of the building.

(2) The Council submits that Schedule 2 of the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005 does not provide an appropriate classification for uses of buildings and the change from one use to another. As a result, structural changes to a building that should be made when moving from one use to another will not necessarily occur.

(3) Schedule 2 is almost identical to Table 2.1 of acceptable solution C/AS1 (related to fire safety). Schedule 2 therefore takes no account of sanitary facilities issues for a building use, structural performance issues, or access and facilities for people with disabilities. Some of the anomalies are highlighted in *Brookers Building Law* at BSRSch2.03:

> "*Anomalous results of the definition of use CS [Crowd Small] include:*
>
> *A change from an art gallery to a day-care centre is not a change of use for the purposes of BA04 despite the significantly more onerous Building Code requirements in respect of sanitary fixtures.*
>
> ***A change of use from a cinema to a dance hall is not a change of use for the purposes of BA04 despite the significantly more onerous Building Code requirements in respect of structural floor loads***."
>
> "*Anomalous results of the definition of use CL [Crowd Large] include:*
>
> *A change from an library to a night-club is not a change of use for the purposes of BA04 despite the significantly more onerous Building Code requirements in respect of sanitary fixtures.*

A change of use from a restaurant to a library is not a change of use for the purposes of BA04 despite the significantly more onerous Building Code requirements in respect of structural floor loads."

"*Anomalous results of the definition of use WL [Working Low] include:*

A change from a covered cattle yard to a storage facility for cement is not a change of use for the purposes of BA04 despite the significantly more onerous Building Code requirements in respect of structural floor loads.

A change from a covered cattle yard to a processing facility is not a change of use for the purposes of BA04 despite the significantly more onerous Building Code requirements in respect of access and facilities for people with disabilities.

A change from a storage facility for cement to business offices is not a change of use for the purposes of BA04 despite the significantly more onerous Building Code requirements in respect of sanitary facilities."

"*Anomalous results of the definition of use WH [Working High] include:*

A change from a storage facility for cement to a spray painting operation is not a change of use for the purposes of BA04 despite the significantly more onerous Building Code requirements in respect of sanitary facilities.

A change from a mattress factory to a plastics warehouse is not a change of use for the purposes of BA04 despite the significantly more onerous Building Code requirements in respect of structural floor loads." (our emphasis)

(4) Another anomaly not highlighted by *Brookers Building Law* is the change from a covered cattle yard to dental and medical offices.