REPORT 2
(1215/52/IM)

SUBMISSION TO ROYAL COMMISSION OF INQUIRY INTO THE CANTERBURY EARTHQUAKES

1. Purpose of Report

This report seeks the Committee's approval of a submission from the Wellington City Council to the Royal Commission of Inquiry into Building Failures Caused by the Canterbury Earthquakes (the Royal Commission).

2. Executive Summary

The Royal Commission has invited expressions of interest from parties wishing to make submissions on specific "issues" within its terms of reference. The Council has an interest in three areas (other issues are Christchurch specific):

- Issue 3 – Legal and best practice requirements
- Issue 4 – Change of New Zealand Design Standards/Codes of Practice
- Issue 6 – Future measures

The Commission wishes to only receive submissions on issues as it invites them. To provide a complete picture of the Council's views and to reduce the number of times the Committee needs to consider this matter, the proposed submission (attached as appendix one) contains comments on all three issues noted above. Relevant sections of the submission will be extracted and forwarded to the Commission as required.

Due to late announcements from the Royal Commission on the hearing subject matters and timings for these, the Issue 3 section of the Council's draft submission has been forwarded to the Commission under the delegated authority of the Chief Executive. The measure was necessary to ensure a placeholder for Council should it choose to present at earlier hearings scheduled for November once the submission was formally approved.

The Council has initiated a broad review of its approach to earthquake prone buildings (EQPBs). It is proposed that the scoping paper for this review be included as part of the first submission to the Royal Commission. Given it is early days for the review, it is difficult for the Council to be definitive about

certain issues at this stage. But the Council will have further opportunity during the review process to engage both with the Royal Commission and Government. Therefore, the submission discusses key areas where the Council believes the legal framework may be deficient or contradictory, and asks that the Commission investigates these areas and makes recommendations on them as appropriate.

One proposed firm position from the Council is that single private dwellings not be included in the legal definition of an earthquake prone building (EQPB). The submission does, however, ask the Royal Commission to consider in what circumstances, if any, Councils (or other entities) should have powers to require hazards or high-risk elements on private dwellings to be addressed, and encourages the Royal Commission to make recommendations on this issue. Some other key matters discussed in the draft submission, include:

- commenting on the threshold – as a percentage of current code – for an EQPB, including considering how the costs, risks and benefits are distributed between the owners on one hand and the community on the other;
- proposing that Councils be able to require hazardous elements on otherwise sound buildings to be addressed;
- proposing that the level of strengthening Councils are able to require is the same as the threshold for an EQPB, and asking that this be clear in the legislation;
- ensuring that Councils retain a degree of flexibility in addressing EQPB issues so that they can develop locally appropriate responses;
- requesting that the Commission consider whether all buildings owners should publicly display the strength of their buildings (which may require owners to have their buildings assessed from time to time);
- proposing that all Councils be required to take an active approach with their EQPB policy and process;
- requesting that the Commission investigates whether requirements that owners must undertake other upgrade work (fire and access) when undertaking earthquake strengthening impedes owners from taking action, and if so, address this it its recommendations;
- requesting that the Commission considers whether the current legislative and Government policy settings are adequate to protect heritage;
- requesting that the Commission considers whether new buildings should be designed with a “low damage” philosophy as opposed to the “controlled failure” philosophy currently applied; and
- requesting that decisions be made as quickly as possible to reduce uncertainty.

The Royal Commission Office has indicated that it wishes to hear from Wellington City Council during the hearings period. Thus there will be further opportunity to present the Council's position on issues as it acquires more information and further cements its views. The likely formal timeframes are:

- Issue 3 Hearings – November
- Issue 4 Hearings – December/January
- Issue 6 Hearing – February 2012
- Royal Commission Report – April 2012
- Formal Feedback – July 2012

3. Recommendations

Officers recommend that the Committee:

1. *Receive the information.*

2. *Approve the submission, attached as appendix one to this report, to be forwarded to the Royal Commission of Inquiry into Building Failures Caused by the Canterbury Earthquakes.*

3. *Agree to include with the submission, the Scoping Paper to Strategy and Policy Committee, 13 September 2011, "Review of Council's Response to Earthquake Prone Buildings".*

4. Background

The Royal Commission sought expressions of interest in July 2011 from interested parties to present submissions on a range of topics related to building failures in the Christchurch earthquakes. Council has interest in what was originally identified in documentation as issues 4c, 4d and 4f and subsequently labeled as follows:

- Issue 3 - Legal and best practice requirements
- Issue 4 – Change of New Zealand Design Standards /Codes of Practice over time
- Issue 6 – Future measures

Submissions to the Royal Commission on specific topics were/are due between September and December. By approving Council's submission in total it can then provide the Commission with responses to specific issues as they arise. Subsequent hearings began in October and are proposed to continue through to March 2012. Both the timing and nature of submission subjects and hearings have been changing with time and are likely to continue to do so with the weight of material the Commission is dealing with.

Notification of subject changes in early October resulted in officers seeking clarification from the Commission where the "Legal and Best Practice Requirements" would be included. They are now included in the topic

"Unreinforced Masonry Buildings" for which submissions closed on 14 October. Since this deadline was prior to Council agreement, the Chief Executive agreed to the release the Issue 3 part of the submission on the basis that it provided a place holder for the Council with the opportunity to be included in subsequent hearings over the weeks beginning 7 and 14 November; and that a final version would be provided following Council agreement on 3 November.

This submission (in total) is a specific response to Council's broad review of its approach to earthquake prone buildings. It can also provide a basis for political level discussions with Government Ministers where Council seeks to influence regulatory, standards and funding solutions. Findings from the Royal Commission and subsequent government responses will be essential considerations in a review of the current policy and other Council responses to EQPB issues.

5. Discussion

Much of the Royal Commission's current work deals with technical and engineering matters. As this stage of the review it will be difficult for Council to be certain about issues and what subsequent changes will result to the regulatory framework, building standards and the economics associated with requiring higher building performance levels. However Council's main interests relate to the legal framework and tools it has available to address such things as dangerous elements on buildings, setting thresholds for older buildings that do not meet new building standard requirements, treatment of heritage buildings and city resilience in and after an event.

Therefore the submission discusses key issues related to the legal framework where it may be lacking in addressing factors of interest to Council. There are also instances where requirements in different Acts are contradictory (for example, the Resource Management and Buildings Acts in their treatment of an earthquake prone building with a heritage value).

The key issues and Council's proposed position in the attached submission are discussed below.

5.1 Definition of Earthquake Prone

The scope and definitions associated with earthquake prone building policy are covered by the Building Act 2004. There is good evidence of a compelling benefit to cost ratio in strengthening above the current 33% of New Building Standard (NBS) in regions like Wellington where seismic risk in high. However the submission focuses on how the current regulatory, commercial and policy environment does not address the inequities of where strengthening and failure costs and benefits lie; rather than what the strengthening threshold might be.

The submission seeks consideration on how the costs, risks and benefits are distributed across the community; and how the legislative and policy framework

responses are appropriate in apportioning costs and benefits across the community.

In the case of strengthening, the costs fall almost exclusively upon building owners, whereas some of the benefits are external and may be distributed throughout the community. Similarly, the costs imposed on the wider community by the failure of a building are generally not borne by building owners. For example, building owners typically do not face the social and economic costs of fatalities, injuries, stress and anxiety, disruption of business activities, loss of investor confidence and reductions of tourism that can result from building failures. In this case the costs imposed on the wider community are external to the building owner.

It is agued that this situation has resulted in an under-investment in strengthening work.

In its definitions of "dangerous", the Building Act gives no authority to Council to deal with dangerous elements on buildings that are otherwise not deemed earthquake prone. Dangerous features such as parapets, balconies, stairs and chimneys should be considered by the Commission and how these are addressed through standards, legal definitions and Council powers.

The Building Act excludes most residential buildings and the submission supports this approach in that the same regulatory approach applied to commercial buildings would not apply to other than multi storey residential buildings. This is on the basis that housing systems generally performed well from a safety perspective during the Christchurch events. The submission however recommends that the Commission gives consideration to non-regulatory options to promote safety aspects in residential properties.

5.2 Level of Strengthening

The current legislation on determining an EQPB has led to councils making different interpretations in their policies on what level of strengthening is required and can be enforced. Regardless of what definition of EQPB is ultimately legislated by Parliament, certainty and consistency needs to be provided on what maximum strengthening requirement can be imposed by Council on a building owner.

5.3 Powers and Enforcement

The submission notes that there are currently gaps in the legislation that limit the Council's ability to instruct and enforce building owners to address some safety situations. For example, where elements attached to a building overhang public space and may be deemed to present a safety risk in the event of an earthquake. The Council's position is that the building owner should be responsible for all necessary safety standards and requirements; and that it has the ability to enforce such requirements.

5.4 Change of Use Provisions

The Council's position in the submission is that the use of current provisions in the Building Act is generally reasonable and adequate. A change of building use already triggers a requirement to strengthening to as near as practical to 100% of NBS.

5.5 Roles of Council

Many of the options presented the submission for Council to address built environment and earthquake risk considerations, extend well beyond current powers in the Building Act. Council's position is that:

- local authorities should remain as the principal bodies responsibility for ensuring building performance
- local flexibility is retained
- local authorities can integrate their regulatory functions, powers and other intervention to create a more strategic response to EQPB issues.
- there is a requirement for all building owners to provide information on a building's performance; and that such information would be publicly available
- proactive policies be required
- the Commission investigates how the existing legal frameworks provide for the protection of heritage values while also providing for public safety.

5.6 Related Upgrading

The submission requests that the Royal Commission investigates the link between requiring other building upgrade work (eg. fire protection, access for people with disabilities) triggered by strengthening requirements, and any impediment this may cause to owners taking action.

5.7 Change of Design Standards/Codes of Practice

The Council would not comment on technical aspects of design at this point. However, Council challenges the current design philosophy based on controlled failures and people being able to exit a building after an event. What the Christchurch earthquake demonstrated was the limitations of this design philosophy in that is resulted in many demolitions, major economic disruption and ultimately costs that all New Zealanders will be required to pay.

Council's position is that technology now allows for "damage resistant" design at only marginally increased construction costs. This design philosophy would result in different standards, but more importantly greatly enhance city resilience and the ability for a rapid return to commercial functionality post an event.

Many of the points in 5.1 – 5.7 would also be included in Issue 6, Future Measures, where these related to current design practice, new technologies, building performance criteria, treatment of heritage buildings and the definition of an EQBP.

5.8 Consultation and Engagement

Group discussions involving property owners, engineers, the construction sector, financiers, building users, heritage interests and residential parties were conducted in August this year. Issues and solutions raised in the submission are widely consistent with points raised during this stakeholder engagement.

5.9 Financial Considerations

There are no direct financial implications. Subsequent reports to the Committee on Council's response to findings from the Christchurch earthquakes will identify any budgetary considerations.

5.10 Climate Change Impacts and Considerations

There are no direct climate change implications.

5.11 Long-Term Council Community Plan Considerations

Long Term Plan considerations arising from final recommendations from the Royal Commission, the Government's response and Council's interests will be reported as part of the LTP process.

6. Conclusion

The Royal Commission of Inquiry into the Canterbury earthquakes has called for submissions from interested parties. Approval is sought for the draft submission attached as appendix one.

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Supporting Information

1)Strategic Fit / Strategic Outcome

The submission addresses issues that arise from legal obligations on the Council imposed by legislation. It also covers issues that relate to the long-term reliance, safety and economic performance of the city.

2) LTCCP/Annual Plan reference and long term financial impact

The submission does not raise issues LTP issues or financial issues. It is possible that recommendations by the Royal Commission of Inquiry and subsequent Government decisions will have implications for future LTPs.

3) Treaty of Waitangi considerations

The submission raises not Treaty of Waitangi issues.

4) Decision-Making

This is not a significant decision. In most cases the submissions identifies areas for further consideration.

5) Consultation

a)General Consultation

No consultation has been undertaken on the specific contents of the proposed submission. However, in developing the submission officers were mindful of the feedback received during a number of informal workshops held as part of the initial stages of a review into the Council's approach to EQPBs.

b) Consultation with Maori

No specific consultation with Maori has been undertaken.

6) Legal Implications

The draft submission raises no legal issues.

7) Consistency with existing policy

The draft submission is consistent with existing policies. It does, however, identify a number of areas not currently covered by existing Council policy where the Royal Commission is asked to investigate further and make recommendations as appropriate.

Appendix1.

Submission by Wellington City Council to

Royal Commission of Inquiry into Building Failures Caused by the Canterbury Earthquakes

"Issue 3 - Legal and best practice requirements"

"Issue 4 – Change of New Zealand Design Standards /Codes of Practice over time"

"Issue 6 – Future measures"

INTRODUCTION

Wellington City Council (the Council) welcomes the opportunity to make submissions to the Royal Commission of Inquiry into Building Failures Caused by the Canterbury Earthquakes (the Royal Commission).

The Wellington region has long been recognised as an area of high earthquake risk. The region has the highest seismic performance standards for buildings in New Zealand. In addition, since the 1970s successive councils of Wellington city have proactively addressed the earthquake risks posed to and from buildings.

A buildings safety policy for Wellington city was adopted in 1990s under the 1991 Building Act. Under that Policy many buildings were strengthened to either two thirds of 1965 code for normal buildings or 100 percent of the 1965 code for heritage buildings. For Wellington 100 percent of the 1965 code is somewhere between 25 and 35 percent of the current building code. Consequently, Wellington has a number of buildings that have previously been strengthened that now require further work.

In addition to strengthening, many buildings were removed especially during the 1970s to 1990s. Since then heritage values have become more a significant consideration for the city, though demolition of some high-risk buildings continues.

The Council continues to implement a proactive response to earthquake prone buildings (EQPBs) under its 2009 EQPB Policy. As of September 2011 the Council had undertaken initial assessments on 2991 buildings, of which:

- 666 are currently identified as potentially earthquake prone
- 207 are confirmed as earthquake prone (as defined under the Building Act 2004 – the Act)

- 2118 have been found to be unlikely to be earthquake prone.

1300 buildings have yet to have an initial assessment. The Council estimates that eventually 700-800 buildings in Wellington City may be identified as earthquake prone.

The role of Councils in addressing buildings and earthquake risk extends well beyond their legal powers and obligations under relevant building legislation.

Councils have a wide range of interventions they may employ to achieve outcomes for their communities. For example Councils may establish policies and regulations under their District Plans, which may either facilitate or impede remediation of earthquake risk in the built environment. Councils can also: provide information to their communities; establish partnerships and undertake project management; create and/or provide financial incentives; provide leadership; and undertake research.

In February 2011 the Council's Strategy and Policy Committee requested that Council officers undertake "*a review – in light of the Canterbury earthquake (February 2011) and Government responses – of the effectiveness of Council's current earthquake prone buildings approach and other relevant policies and implementation measures*" (the Council's review).

On 15 September 2011 the Strategy and Policy Committee considered advice from officers on the objectives, outputs, issues and timelines and that will determine the scope of the Council's review. This advice is contained in the report **"***Scoping Paper: Review of Council's Response to Earthquake Prone Buildings*", which is attached to this submission as appendix 1. The decisions made by the Committee are attached as appendix 2.

The Council commends this report to the Royal Commission as it provides a high-level analysis of some key deficiencies, challenges and objectives for the performance of the built environment in earthquakes as seen by the Wellington City Council.

The Council notes that it is early days for its own review and that there is much work to do before the Council can be definitive about the issues identified by the Royal Commission it seeks submissions on. With this caveat, further comment is provided below.

"Issue 3 - Legal and best practice requirements"

1. Definition of "Earthquake prone building" (EQPB)

The Council wishes to raise three key matters regarding the current legal definition of an EQPB:

- the reference to a "**moderate**" earthquake in section 122(1)(a) of the Act, which is subsequently defined in the "Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005" as an earthquake one-third as strong as the earthquake shaking that would be used to design a new building at that site (commonly referred to as "33 percent of New Building Standard or NBS ").
- The references in s122(1)(a) to "ultimate capacity exceeded" and s122(1)(b) to "collapse"
- Section 122(2) which has the effect of excluding the vast majority of buildings used as dwellings from the definition of an EQPB.

1.1 "Moderate" earthquake

The Council notes that the definition of an EQPB sets both the strength threshold for when remedial action must be taken and – at least as interpreted by many Councils - the maximum level of strengthening that can be required for a building.

There has been much comment from the Wellington community on the 33% of NBS issue.

The Council notes the view expressed by a number of engineers that 67% of NBS may be a more appropriate threshold. The Council also notes the concerns of many building owners that higher thresholds impose higher costs, often greater than the value of the buildings being strengthened.

Previous cost benefit analysis[1] suggests that for both commercial and residential buildings:

- there is a compelling benefit to cost ratio in favour of undertaking strengthening work in regions where seismic risk is high

1 Hopkins, D. C. (2008). "Report on Cost Benefit of Improving the Performance of Buildings in Earthquake." Department of Internal Affairs", Wellington.
Thomas, G.C and Irvine J.D (2008) Post-Disaster Benefits of Upgrading Residential Dwellings Foundations, School of Architecture, Victoria University of Wellington, Paper to New Zealand Society for Earthquake Engineering Annual Conference 2008

- the benefit to cost ratio of strengthening increases as the level of strengthening performance increases (i.e. from 33% of NBS to 100% of NBS) across all areas of seismic risk.

From the perspective of total benefit compared to total cost - and based on previous analysis – there appears to be a strong case for the threshold for defining an EQPB and the level of strengthening required being above 33% of NBS.

However, a macro analysis such as this ignores how costs and benefits are distributed across the community.

In the case of strengthening, the costs fall almost exclusively upon building owners, whereas some of the benefits are external and may be distributed throughout the community.

Similarly, the costs imposed on the wider community by the failure of a building are generally not borne by building owners. For example, building owners typically do not face the social and economic costs of fatalities, injuries, stress and anxiety, disruption of business activities, loss of investor confidence and reductions of tourism that can result from building failures. In this case the costs imposed on the wider community are external to the building owner.

The current commercial, policy and regulatory environment does not address these "externalities". This has created what is almost certainly a systemic and substantial underinvestment in strengthening work.

The Council acknowledges, therefore, that the current threshold of 33% of NBS is essentially an attempt to balance imposing reasonable financial costs on building owners on the one hand and public safety objectives on the other.

While this may have been a reasonable approach at the time, the Christchurch events demonstrate that a better approach is required in future where the benefits, costs and risks of people's decisions are more accurately recognised in policy and regulatory frameworks and in the commercial environment.

The Council submits that, in assessing and making recommendations on the legal threshold for an EQPB, the Royal Commission considers not only total cost, risk and benefit, but also:

- how those costs, risks and benefits are distributed across the community
- what legislative or other policy frameworks may be appropriate so that the costs and benefits of taking action are appropriately allocated across the community.

1.2 "Ultimate capacity" and "collapse"

The Council has identified a number of buildings that, although not otherwise legally earthquake prone, have elements such as balconies, parapets, chimneys, etc that, in the Council's view, are likely to fall and may cause death or injury in a moderate earthquake.

Such a building is not "dangerous" as defined under section 121 of the Act, and arguably it will not have its "ultimate capacity exceeded" in a moderate earthquake, meaning it is not "earthquake prone".

On a number of occasions the Council has identified such risks and has asked owners to undertake remedial work. However, in some cases building owners have refused, arguing that the building does not meet the definition of earthquake prone (or dangerous) and that the Council therefore, has no power to require remediation.

The Council believes that hazardous elements on otherwise sound buildings can pose a significant threat to the public. Moreover, the cost of remediation of such elements is often modest.

Consequently, the Council submits the Royal Commission should give consideration to this issue, with a view to recommending that:

- the legislation be clarified
- Councils are empowered to require that elements on buildings that are likely to be hazardous in an earthquake of the threshold strength for an EQPB, be remediated
- consideration be given to developing standards and codes of practice guidance, as appropriate, to guide the remediation of hazardous elements on buildings.

1.3 Exclusion of most dwellings from the definition of EQPB

In general the Council does not consider it is appropriate to apply the same regulatory approach to single private dwellings as applies to commercial buildings and multi-story multi-unit dwellings. This is because there is clear evidence that the risk to life from New Zealand's light timber / steel framed houses is low and that housing systems have generally performed well from a safety perspective.

There is, however, evidence that some particular elements on houses – for example concrete tile roofs, unreinforced masonry chimneys, and sub-standard foundations – pose safety risks. Moreover, widespread failures in the private building stock – even if not life threatening – can:

- greatly increase the economic costs of an earthquake

- lead to dislocation of communities and the need for emergency housing
- create long-term disruption and stress to people's lives.

For example, by 14 September 2010, of the 49,000 insurance claims arising from the 2010 Darfield earthquake, 14,000 were reportedly from chimney damage.

Evidence[2] shows that the costs of mitigation before an event can be modest compared to total costs of remedy post-event. For example, Thomas and Irvine 2008 found that for a major earthquake in Wellington the total costs (to dwellings, contents, and indirect costs) of failures cause by sub-standard foundations alone was $5.018 billion while the cost of remedying foundations was $291 million. Even when the probability of a major event is factored in, remedying foundations was found to have a benefit to cost ratio of 4.25 – 8.5 to 1. The same study estimated that:

- deaths in private dwellings would fall from a projected 120 to 24
- the number of people needing emergency accommodation would fall from 42,900 to 16,000.

As noted above, the Council does not consider that single private dwellings should be treated in the same manner as commercial and multi-story multi-unit buildings. The Council also notes that there are likely to be substantial benefits from addressing the performance of single private dwellings in earthquakes, including public safety benefits.

In general, the Council anticipates adopting a non-regulatory approach to encouraging homeowners to improve the earthquake performance of their homes.

The Council submits that private dwellings should not be included in the legal definition of an EQPB (except multi-story multi-unit dwellings as is currently the case).

However, the Council requests that the Royal Commission considers in what circumstances, if any, Councils (or other entities) should have powers to require hazards or high-risk elements on private dwellings to be mitigated or remedied, and encourages the Royal Commission to make recommendations on this issue.

[2] Hopkins, D. C. (2008). "Report on Cost Benefit of Improving the Performance of Buildings in Earthquake." Department of Internal Affairs", Wellington.

2. Level of strengthening required for buildings identified as an EQPB

Regardless of the definition of EQPB ultimately legislated by Parliament, Councils (or such other entity as may be empowered) will need to determine the level of strengthening required once an EQPB has been identified.

At present a significant number of territorial authorities in New Zealand have interpreted the current legislation as allowing Councils - via their EQPB Policy - to require identified EQPBs to be strengthened well beyond the 33% of NBS threshold. The remaining councils, including Wellington City Council, have interpreted the legislation to mean that once a building's strength exceeds the 33% of NBS threshold it is no longer an EQPB and therefore the Council cannot require further strengthening.

To avoid uncertainty, potential delays and costly litigation, the Council submits that this issue be clarified in any new legislation.

The Council considers that, in the interests of equity between building owners, transparency of the legislative framework, and public safety the threshold for an EQPB should also establish the maximum strengthening requirements that can be imposed by a local authority on a building owner.

3. Powers and Enforcement

The Council considers that the powers to require and enforce actions under a section 124 notice are generally adequate. The Council notes however, that few enforcement actions have been undertaken since building owners are generally still within the timeframes available to take remedial action.

One area where the Council seeks further clarification is in respect of structures that are attached to a building, but overhang or rest on public space. The Council believes it should be the responsibility of the building owners to meet all necessary safety standards and strengthening requirements for such structures, even though the building owner is not the owner of the land upon/above which the structure is located.

4. Change of Use Provisions

The Council considers that the change of use provisions contained in sections 114 and 115 of the Act are generally reasonable and adequate. The Council notes that the term "as nearly as is reasonably practical" is open to interpretation and has led to sometimes lengthy discussions with building owners. However, the Council does not consider the more legislative guidance or specificity is required at this time.

5. Role of Councils

As noted above the role of Councils in addressing the built environment and earthquake risk extends well beyond their legal powers and obligations under the Act.

Nonetheless, the Act provides key powers and functions for Councils and, in that respect, the Council notes that:

- Councils should continue to be the principal bodies responsible for ensuring that the earthquake performance of the existing building stock is improved where necessary.

- A degree of flexibility is required so that Councils can develop locally appropriate responses recognising local conditions, risks and community priorities.

- Councils can integrate their regulatory functions and powers with other interventions to create overall strategies not only to improve the built environment but also earthquake preparedness and emergency response.

- Information collected by Councils can play a vital role in allowing markets and communities to make informed decisions about risk and priorities. In this respect, it may be appropriate to empower Councils to require building owners to provide - on say a 5 to 10 yearly basis - information on the assessed earthquake performance of individual buildings whether or not they are EQPBs.

  This information could be publicly available to allow better decision-making from building users, prospective buyers, financiers and insurers, and the wider community. Such a regime might be similar to the existing building Warrant of Fitness provisions, though less frequently required.

  The Council requests that the Royal Commission considers whether the provision of such information to the market and wider community is justified and practical.

- The obligation on Councils to develop a policy on earthquake-prone buildings is sound. However, the legislation provides very little guidance to Councils on what may be appropriate minimum requirements of a Policy. For example in the Council's view, all policies established under the Act should actively identify EQPBs, publish this information, and require – in accordance with their local priorities and timeframes –

remedial action to be taken. The Council does not consider that passive policies are appropriate.

- The preservation of built heritage values is particularly challenging. Section 6 of the Resource Management Act 1991 provides that "*the protection of historic heritage from inappropriate subdivision, use, and development*" is a matter of national importance which must be recognised and provided for by Councils, *inter alia*. There are however, conflicts between the protection of built heritage and public safety in an earthquake. Moreover, strengthening a heritage building to the current or a new strength threshold will not necessarily protect that building after a major event.

  The Council requests that the Royal Commission investigates how existing legal frameworks provide for the protection of heritage values whilst providing for public safety and considers whether changes to the regulatory environment or other Government policies (such as taxation provisions or Government funding support) may be appropriate.

6. Other upgrade work – fire and access

The Council notes that earthquake strengthening work will generally also trigger requirements for the upgrade of fire protection and access for people with disabilities.

While the Council strongly supports both of these objectives, the Council notes that other upgrade work can add considerably to the overall costs of undertaking strengthening. This may impede building owners taking action to reduce earthquake risk.

The Council requests that the Royal Commission investigates:

- whether there is evidence that requirements to undertake other upgrade work is acting to delay or prevent earthquake strengthening
- whether such requirements are justified in the interests of public safety – especially fire safety - and wider public policy.

"Issue 4 – Change of New Zealand Design Standards /Codes of Practice over time"

The Council does not wish to comment on technical aspects of the design standards. However, the Council wishes to comment on the design philosophy which underpins the standards.

In general, the design philosophy adopted in New Zealand is that the performance of buildings in a significant earthquake is such that the occupants of the building will be able to safely evacuate the building after the event. Buildings are generally designed to undergo controlled failure at known points, thereby absorbing and dissipating energy.

The Christchurch earthquakes demonstrated the effectiveness of this approach at protecting human life.

The events of Christchurch also demonstrate that this approach can lead to significant numbers of modern buildings needing to be demolished post-event. In the case of Christchurch such buildings include the Copthorne Hotel, Crown Plaza Hotel, Canterbury Convention Centre and the iconic Town Hall.

Such an outcome can greatly increase the long-term economic costs and disruption caused by a major event.

Costs of demolition and replacement and/or compensation tend to fall on the insurance industry and central Government. The former can be particularly significant, since the response of the insurance industry to such large losses may be to decline cover in future, with flow-on implications for financing repair and recovery activities. In either case, substantial costs must be borne by all New Zealanders, in the form of insurance premiums, financing additional Government expenditure, or both.

The Council is aware that alternative approaches in engineering are now possible using "damage resistant design"[3]. Under this approach buildings are designed to both protect human life and be functional after a major event, either immediately or following low cost repairs. Moreover, the cost of such an approach may be the same or only marginally more than conventional design. For example, the Council has been advised that in the case of the Te Puni Village at Victoria University the additional cost of using a low damage design was just 0.5 percent of the total project cost.

Such an approach to building design could greatly enhance the resilience and functionality of cities after a major event, reduce recovery time, and substantially reduce the total risk exposure of building owners, insurers, and the Government.

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[3]Refer Professor Andy Buchanan, "Time right for innovative engineers" , The Press 14 July 2011

The Council submits that:

- the issue of design philosophy, which underpins the building standards, should be fully evaluated
- recommendations should be made by the Royal Commission as to whether the current philosophy remains an appropriate approach to risk management and is ultimately cost effective.

"Issue 6 – Future measures"

Much of the Council's commentary on the issue of future measures is contained in its submissions on issues 3 and 4. In particular:

New buildings

Item a. Necessary changes to current design practice and
Item b. Consideration of new technologies, including their cost

Please refer to the Council's submission on Issue 4 – Change of New Zealand Design Standards /Codes of Practice over time.

Existing buildings

Item b. The appropriate level of compliance with new building standards or alternative performance criteria, taking into account the cost of compliance

Please refer to the Council's submission on Issue 3 - Legal and best practice requirements, section 1. Definition of "earthquake prone building", subsection 1.1 "Moderate" earthquake.

The Council wishes to make two additional points; the first in respect of strengthening and/or preservation of heritage buildings and the second on timing of decisions.

Heritage buildings

The Canterbury earthquakes have demonstrated that regulatory protection for heritage buildings is not enough to preserve them for future generations[4]. Engineering solutions are also required, the cost of which may be beyond the reach of building owners or even local communities. Protecting heritage buildings may require strengthening well over the threshold for what is legally considered earthquake prone, and in some cases above 100 percent of NBS.

Section 6 of the Resource Management Act 1991 (RMA) describes "matters of national importance" and requires that Councils, in achieving the purpose of the Act - "shall recognise and provide for ..... the protection of historic heritage from inappropriate subdivision, use, and development". The practical effect of section 6 is to compel Councils to include regulatory protections for heritage buildings in their district plans, and as a consequence property owners have far less flexibility in remediating earthquake risk.

[4]Refer http://www.historic.org.nz/en/TheRegister/Heritage%20Lost/Lost%20Heritage%202010-11.aspx

The Council does not advocate any changes to section 6 of the RMA in response to earthquake risk.

However, it is an important matter of public policy as to how the protection of heritage values – that Parliament has determined to be a matter of national importance – is to be reconciled with the protection of public safety embodied in both the RMA and Building Act. The commercial and financial realities are that there are often insufficient resources to "protect" – in an engineering sense – those buildings that 'require' regulatory protections under the RMA.

At present the Building Act and Government policy leave these issues almost exclusively in the hands of local Government. Section 131(2)(c) of the Building Act simply states that a territorial authority's policy on EQPBs must state "how the policy will apply to heritage buildings". Many territorial authorities deal with this aspect in their policies simply through saying that heritage buildings will be treated the same as any other building.

In terms of Government policy, the Council is advised that the costs of strengthening work are generally only depreciable not tax deducible for building owners.

In addition, the Historic Places Trust has been appropriated just $0.563 million to support the preservation of privately held heritage across New Zealand[5]. This compares unfavourably with the $10.347 million appropriated[6] to support biodiversity outcomes on private land and through community groups.

The Council notes that the public policy issues arising in respect of biodiversity (also a matter of national importance under section 6 of the RMA) are very similar to those raised by the protection of heritage buildings.

The Council asks that the Royal Commission investigates whether the current policy settings for the regulatory and physical protection of heritage buildings:

- are likely to impede the remediation of heritage buildings that are at risk from earthquake or have elements that may be hazardous during an earthquake
- are likely to lead to the adequate protection of heritage buildings that are at risk from earthquakes
- make recommendation accordingly.

[5] http://www.historic.org.nz/ProtectingOurHeritage/FundingProtection.aspx
[6] http://www.treasury.govt.nz/budget/2011/ise/v3/ise11-v3-pia-conser.pdf - page 43

Timing of Decisions

The Council has received feedback from a number of owners of EQPBs that they are currently delaying taking decisions on their buildings given the uncertainty about what strengthening requirements will be imposed in future.

While this is unavoidable to some extent, the Council asks that the Royal Commission recommends to Government that decisions, including new legislation if necessary, are taken and implemented as quickly as possible to remove uncertainty.

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