
REPORT 1
(1215/52/IM)

AMENDMENT TO THE EARTHQUAKE PRONE BUILDING POLICY

1. Purpose of Report

To present to the Strategy and Policy Committee proposed amendments to the 2006 Earthquake Prone Building Policy (2006 EQPB Policy), and seek committee approval for public consultation.

2. Executive Summary

The Building Act 2004 required the Council to develop a policy on earthquake prone buildings (EQPB). The resulting 2006 EQPB Policy established an active Council process to identify EQPB and the Council has funded an Initial Evaluation Procedure (IEP) for these structures.

The final report back on the 2006 policy consultation (11 May 2006) noted that the policy would need to be reviewed when the IEPs were completed and the extent of the strengthening challenge for Wellington City was more accurately identified. The Council reassessment of the proposed deadlines was envisaged in the light of further information on the total economic and urban amenity impacts.

Approximately one third of 3,800 buildings potentially being deemed to be earthquake prone under the increased strengthening requirements of the Building Act 2004 have now had an initial evaluation. These initial evaluations are considered to be broadly representative of the total number of earthquake prone buildings.

These results indicate that approximately one quarter of the total of 3,800 potential EQPBs could fail to meet minimum standards (less than 33% of regulation requirements for a new building).

Once a building has been identified as earthquake prone and a notice issued requiring strengthening to be undertaken, the current policy sets maximum building strengthening timeframes of 5, 10 and 15 years for high, moderate, and low category buildings respectively. The policy, in addition, requires building owners to undertake strengthening if the cumulative value of works requiring building consent exceeds one third of the capital value of the building.

Building Consents and Licensing Services report feedback from owners who have a number of buildings in their portfolio expressing concern with the potential impact on having to fund and co-ordinate the strengthening of a number of buildings within the current timeframes.

It is proposed to extend the timeframes for strengthening compliance in the 2006 policy by a further five years for each importance category as follows:

- High priority Change from 5 to up to 10 years.
- Moderate priority Change from 10 to up to 15 years.
- Low priority Change from 15 to up to 20 years.
- Passive No maximum – unchanged.

It is further proposed to remove the one third of capital value trigger requiring strengthening in advance of the maximum timeframes otherwise required. This proposed change would allow building owners to improve the amenity of the buildings without the requirement to strengthen at that time. This allows building owners the full timeframes in which to make financial provision for strengthening works. Regardless, it is recommended that the Council's policy should continue to encourage strengthening to the highest practical standard when other significant work is undertaken.

This change does not affect the Change of Use provisions for the Building Act.

The proposals represent a moderate relaxation of the maximum strengthening timeframes for buildings identified since 2006 as earthquake prone, while ensuring an appropriate balance with public safety concerns by maintaining Council pressure on those building owners who remain in breach of long standing strengthening notices issued under the previous policy.

3. Recommendations

It is recommended that the Committee:

1. *Receive the information.*
2. *Agree to extend the timeframes provided in the 2006 Earthquake Prone Building Policy for strengthening compliance by a further five years for each priority category as follows:*
 - *High priority – Change from 5 to up to 10 years.*
 - *Moderate priority – Change from 10 to up to 15 years.*
 - *Low priority – Change from 15 to up to 20 years.*
 - *Passive – No maximum – unchanged.*
3. *Agree to remove the one third of capital value of cumulative works 'trigger' in the 2006 Earthquake Prone Building Policy requiring strengthening in advance of the maximum timeframes otherwise required.*

4. *Amend the policy to include provisions allowing a council officer with the appropriate delegations to issue an Earthquake Prone Building notice with a timeframe different to the timeframes stated in the policy. This specifically relates to situations where:
 - a. *Due to the effects of an earthquake*
 - *A building that was considered earthquake prone and had been issued a notice under this policy has been affected and requires immediate action to address public safety issues*
 - *A building that was not considered earthquake prone prior to the earthquake has been affected and it requires immediate action to address public safety issues*
 - b. *A building owner(s) has failed to comply with a notice and/or the time frame has expired.**
5. *Agree that no changes be made to current requirements on the approximately 20 building owners who have had long standing notices under the previous Building Act 1991 to complete strengthening work on unreinforced structures.*
6. *Note that the current Earthquake Prone Building Policy includes the provision for owners of two or more EQP buildings to negotiate on a case by case basis with the Council, a strengthening plan across the portfolio of properties that may modify the timeframes and order in which the buildings are to be strengthened but will improve overall public safety gains.*
7. *Note that:*
 - a. *The Council is currently undertaking a comprehensive review of its property portfolio to inform the development of the LTCCP, and*
 - b. *a proposed response to earthquake strengthening issues will be developed at that stage, if required.*
8. *Recommend to the Council that it:*
 - a. *Agree to the revised Earthquake Prone Building Policy and associated statement of proposal.*
 - b. *Agree to initiate the special consultative procedure as a basis for consultation.*
 - c. *Note that feedback from the consultation process and the final policy will be reported back to the Strategy and Policy Committee in September 2008.*

4. Background

With the introduction of the Building Act 2004 all territorial local authorities (TLAs) were required to adopt a policy on earthquake prone buildings.

The Council agreed to an Earthquake Prone Building Policy in May 2006. The policy outlines the Council's approach to ensure earthquake-prone buildings are strengthened to the level required by the Act, or be demolished. This Policy replaced the Council's Building Safety Policy 1998. The Building Act 2004 gives Councils no discretion over the 33% standard that determines whether a building is earthquake prone, however the setting of timeframes to complete strengthening work to these buildings were delegated to Councils.

The final report back on the 2006 policy consultation (11 May 2006) noted that the policy may need to be reviewed when the IEPs were completed and the extent of the strengthening challenge and associated economic costs were more accurately identified. The Council reassessment of the proposed deadlines in the light of further information on the total economic costs was envisaged. Also, the Building Act 2004 requires review of the policy within five years.

When the Council established the previous policy for dealing with earthquake-risk buildings prior to the Building Act 2004 some buildings in the city were demolished rather than being strengthened. This was particularly prevalent in the mid 1980s after the stock market crash and the resulting tight financial market. The number of buildings being lost to demolition caused the Council to amend its district plan requiring a building replacement proposal before approving the demolition. These actions slowed the demolition process. This also reinforced the Council's wish to take a more considered approach to building strengthening and to offer incentives to building owners to help retain heritage buildings.

This integrated approach helped establish a balance between the public safety risk and economic costs being felt in the city at that time. This approach included flexibility in timing for the strengthening of the at-risk buildings, particularly those buildings with heritage and architectural merit. There were however, some examples of unsympathetic work in strengthening buildings with visible K bracing and other external bracing to reduce costs. The architectural character of some buildings was spoiled through such bracing design.

4.1 Current (2006) Policy on maximum timeframe to strengthen buildings

The key elements of the 2006 Policy include:

- prioritisation
- strengthening timeframes
- approach to owners already served notices
- an additional one third of capital value strengthening trigger
- clarification of minimum strengthening standards
- an active approach.

A summary of these elements is set out below.

Prioritisation and strengthening timeframes. Prioritisation to strengthen EQPBs is based upon two criteria; the importance level, and the age and condition of the building. The maximum timeframes under the current 2006 policy for undertaking strengthening work for a building that has been determined as earthquake-prone are:

- High priority 5 years
- Moderate priority 10 years
- Low priority 15 years
- Passive No maximum.

A description of what constitutes each priority is set out in Attachment 1 of the 'Statement of Proposal' in Appendix 1 of this report.

Approach to owners already served notices. Buildings with earthquake-prone building notices issued under Section 66 of the Building Act 1991 will be reissued a notice under Section 124 of the Building Act 2004 requiring strengthening. For these buildings, work must begin within two years of the notice being issued.

Additional one third of capital value strengthening trigger. When an application for building consent, or a series of building consent applications, relating to a building determined to be earthquake-prone is received from 1 June 2006 with a cumulative project value greater than one-third of the building's capital value (as defined in section 2(1) of the Rating Valuations Act 1998) for local government rating purposes the building owner will be required to undertake the structural design for strengthening and either include the: complete strengthening work in the building consent or include the strengthening work to the area otherwise affected by the building work, and agree with the Council on a programme to complete the strengthening works within the maximum timeframe set out above.

Clarification of minimum strengthening standards. The Building Act 2004 and Building Regulations 2005 define the meaning of an 'earthquake-prone building'. As a general guide, an earthquake prone building will have strength that is 33% or less of the seismic loading standard NZS 1170.5: 2004. The policy provides that buildings classified as 'earthquake-prone' will need to be strengthened to more than 33% of the minimum seismic loading standard specified in NZS 1170.5:2004. The Council does not however have legal authority to require building owners to go beyond the one third of current code requirement.

Active approach. The Council has elected to assess the status of earthquake prone buildings using an initial evaluation process (IEP) at its own cost. The alternative is a passive approach that involves the Council reacting only on receipt of building consent applications.

Heritage approach. A heritage building includes all buildings listed as a heritage building in the Wellington City District Plan and/or those registered by the New Zealand Historic Places Trust.

It is likely that some heritage buildings will be classified as earthquake prone under the Act. The impact on heritage buildings in the city could be significant if it is not financially viable to strengthen the building and demolition is favoured by the building owners.

The continued approach in this Policy to heritage buildings is to reduce the impact of any strengthening work required on the heritage fabric of the building. The Council will continue to proactively seek to protect heritage buildings as follows:

- strengthening is required so that it is no longer earthquake-prone
- the maximum timeframes will apply, just as it does to all buildings
- a management plan outlining how strengthening will preserve the heritage fabric of buildings is to be provided
- demolition is not encouraged.

5. Discussion

Initial results indicate that approximately one quarter of the total of 3,800 potential EQPBs, or around 900 buildings, could fail to meet minimum standards (less than 33% of regulation requirements for a new building).

5.1 Economic costs and implications.

Strengthening costs for EQPB owners have not yet been robustly tested but it is expected to be significant to meet minimum regulation requirements. These costs need to be considered in the light of the public safety, heritage protection and business continuity benefits of more earthquake resistant buildings.

The time frame over which the economic cost is spread is important for the integrity and acceptability of the policy. It has taken in the order of thirty years to achieve the strengthening of those buildings first identified as earthquake prone in the 1970s.

5.2 Urban amenity / heritage impacts.

While demolition is somewhat controlled by Council, boarded up buildings cannot be regulated against. A repeat of previous urban amenity and heritage impacts is possible if building owners are not allowed sufficient time to make financial plans for strengthening. Appropriate required timeframes for strengthening a building are therefore important if urban amenity impacts are to be avoided.

The experience through the 1970s and 1980s under Council's previous earthquake prone building policy was an increase in the number of boarded up buildings, demolitions and resulting vacant sites, and visually inappropriate standards of strengthening. While the introduction of district plan rule changes against demolition and heritage protection funds were introduced to mitigate these effects the urban impacts were often significant.

5.3 Appropriateness of current strengthening timeframes

The precise definition of timeframes and other considerations such as strengthening standards are complex issues. The primary New Zealand authority on this subject referred to by the Department of Building and Housing is the paper '*Strengthening Existing New Zealand Buildings for Earthquake: An analysis of Cost Benefit using Annual Probabilities*', David Hopkins & George Stuart, 2003. The paper provides a model that calculates both retrofit costs as well as the improvement of public safety and economic disruption outcomes from an earthquake, adjusted for the probability of such an event.

The conclusions of this paper for Wellington indicate that a strengthening programme over a very short period of ten years has a positive benefit cost ratio – particularly for pre-1965 buildings. The paper also conducts sensitivity analysis which indicates that a longer retrofit period significantly improves the benefit cost ratio. In this case benefit cost ratios improved by 100% when the retrofit period was extended from ten to fifty years.

It would be expected that older buildings would show a stronger net benefit from retrofit. A longer time frame for retrofit would also be expected to have net benefits as the costs are spread over a longer period.

The current 2006 policy strengthening timeframes are 5, 10 and 15 years, for high, moderate and low priority building respectively. Council experience since the 1970s has been that:

- Approximately thirty years has been required to achieve widespread compliance.
- Shorter timeframes have often resulted in poor urban amenity outcomes such as demolitions and the creation of ad hoc car parks, boarded up buildings or visually inappropriate forms of strengthening.
- Longer timeframes have generally resulted in strengthening to a higher structural and visual standard. The longer timeframes better allow owners to make financial provision for strengthening costs. Technical analysis of the benefit cost ratios of strengthening requirements support this conclusion, indicating that longer retrofit time periods can have higher benefit cost ratios.

In light of the technical discussion and reflection on previous Council experience the current 5, 10, 15 year strengthening timeframes are considered inappropriate. It is proposed that the timeframes be extended to 10, 15 and 20 years for high, medium and low priority buildings respectively in line with Council's previous experience of workable deadlines.

Other councils have typically chosen a more discretionary approach where precise timeframes are not apparent or are determined on a case by case basis. This would suggest the likelihood of relatively long timeframes being set in practice. (see below for further discussion of other councils).

It is proposed that no changes be made to current requirements on the approximately 20 building owners who have had long standing notices under the previous Building Act 1991 to complete strengthening work on unreinforced structures. It is expected that a small proportion of owners are likely to resist strengthening work even in the long term. The Council should continue to enforce requirements following such long term notice periods.

5.4 Appropriateness of current one third of capital value trigger

The current 2006 Policy requires strengthening to a minimum of 33% of code if the cumulative value of proposed work on an earthquake prone building exceeds 1/3rd of the capital value of the building. The one third of capital value trigger was established as it is typically more economic to complete strengthening at the time of other major works.

The one third of capital value trigger could be an excessive burden for some building owners, preventing improvements in the short term that would enable funds to be built up to meet strengthening costs at the otherwise required deadline. A possible outcome of this trigger is a halt to investment in upkeep of the building with possible loss of heritage value and/or an increase in the number of run down or derelict structures.

No other councils have such a defined trigger requiring strengthening in advance of the timeframes otherwise required (see below for reviews of other councils).

Possible options include:

- a. Retain the current one third of capital value trigger unchanged requiring strengthening to a minimum of 33% of code requirements.
- b. Lift the one third of capital value trigger to a higher percentage of capital value or an officer assessment of a significant value of works.
- c. Remove the one third of capital value trigger completely.
- d. Amend the one third of capital value trigger to require agreement with Council officers of a plan demonstrating steps to achieve the minimum required strengthening within the Council's maximum timeframes.

Options a) and b) are not recommended as they could create an excessive financial burden on building owners. Any officer assessment of 'significance' would likely be challenged as an arbitrary decision.

While option d) has some merit it is recommended that Council adopt option c) to remove the one third of capital value trigger completely. In any case it is recommended that the Council's policy should continue to encourage

strengthening to the highest practical standard when other significant work is undertaken.

5.5 Other TLA's

A review of policy provisions across a sample of TLAs in Greater Wellington and other 'high seismic' areas of New Zealand has been undertaken. This analysis has shown that no two policies are alike in the key areas of consent triggers, assessment process and timeframes to meet minimum standard. One of the TLAs reviewed has even stated in its policy that it will hold back on defining timeframes for EQPB with strength between 10% – 33% of the NZ standard until it has undertaken the first review of its policy. Other councils have typically chosen a more discretionary approach where precise timeframes are not apparent or are determined on a case by case basis. This would suggest the likelihood of relatively long timeframes being set in practice.

The use of a building consent application as a trigger to require building owners to undertake strengthening work is another key area that is flexible in the TLAs reviewed. A number of the TLA's, including two in the Wellington region, have no consent trigger. The remaining TLAs reviewed that did have a consent trigger used the word 'significant' in describing the amount or value of work that would reach the trigger point. This indicates a potentially large degree of discretion and implies a provision for negotiations between owners and the council on a case by case basis.

5.6 Portfolio approach

The current 2006 policy provisions deal with strengthening on a building by building basis. In some instances a portfolio of buildings are owned by the same owner. Improvements in overall public safety might be achieved by allowing owners of two or more buildings to negotiate a strengthening plan that varies the compliance with strengthening timeframes, but provides an overall gain in public safety. It is recommended that the EQPB Policy include such provisions.

5.7 Administrative implications

Letters informing building owners of initial IEP results have already been delivered to owners of approximately 580 buildings. These parties would need to be advised of any policy revisions. Section 124 notices as a result of this initial advice have already been served to approximately 100 building owners of 13 buildings. The proposed extended timeframes would need to be advised to these owners. Reissuing notices to these building owners will cost approximately \$10,000.

Section 124 notices that include strengthening timeframes remain outstanding for owners of 20 buildings still in breach of the Council's previous policy provisions under the Building Act 1991. No change to this process is recommended.

5.8 Next steps

It is proposed that the Council consults on the draft policy via the special consultative procedure over a five week period. This process will include hearings (if required) and a report back to the Strategy and Policy Committee and the Council in September 2008.

6. Conclusion

The Council-funded IEP process since 2006 has further confirmed the economic significance and potential urban amenity impacts of the earthquake prone building strengthening challenge faced by Wellington City. Reflection on the Council's past experience with securing compliance with changes in earthquake strengthening requirements has led to the conclusion that the current 5, 10 and 15 year timeframes, and the one third of capital value of works as a trigger for strengthening, are overly restrictive requirements that pose risks to the city economy and urban amenity.

Some moderate relaxation of the maximum strengthening timeframes is proposed for buildings identified since 2006 as earthquake prone, while maintaining Council pressure on those building owners who remain in breach of long standing strengthening notices.

Contact Officer: *Chris Linnell- Senior Policy Advisor*

Supporting Information

1) Strategic Fit / Strategic Outcome

This policy proposal aligns with the following Strategic Outcomes:

- (1) *More liveable*
- (9) *Safer*

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

The Policy relates to Annual Plan reference 1.4.1: Earthquake Risk and Mitigation.

3) Treaty of Waitangi considerations

No specific Treaty of Waitangi considerations have been identified.

4) Decision-Making

This is not a significant decision as defined by the Wellington City Council Significance Policy.

5) Consultation

a) General Consultation

A statement of proposal has been prepared and the special consultative procedure will be used to consult with ratepayers and interested parties.

6) Legal Implications

Legal advice was provided in the development of the draft Policy.

7) Consistency with existing policy

This report recommends updating the Earthquake-Prone Buildings Policy