

10. EARTHQUAKE-PRONE BUILDINGS POLICY, DANGEROUS BUILDINGS AND INSANITARY BUILDINGS POLICIES

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PURPOSE OF REPORT

1. The Building Act 2004 requires territorial authorities to adopt a policy on dangerous, earthquake-prone and insanitary buildings by 31 May 2006, using the special consultative procedure in the Local Government Act 2002.
2. This report considers various options and recommends a preferred option for the draft policy that will be used in the special consultative procedure set out in the Local Government Act 2002 for meeting the policy requirements set out in the Building Act 2004.
3. This policy needs to be publicly notified before Christmas to allow sufficient time for the special consultative procedure to be completed by 31 May 2006.

EXECUTIVE SUMMARY

4. The Building Act 2004 (the Building Act) requires territorial authorities (TAs) to adopt a policy on dangerous, earthquake-prone, and insanitary buildings by 31 May 2006. The policy must include:
 - (a) The approach that the TA will take in performing its functions under the Building Act;
 - (b) The TA's priorities in performing those functions; and
 - (c) How the policy will apply to heritage buildings.

This policy must be adopted by a special consultative procedure. The policy must be reviewed every five years.

5. While the Building Act requires each TA to develop a policy on dangerous, earthquake-prone, and insanitary buildings, the legislation does not prescribe any particular policy form or approach. Rather, TAs and their communities must develop a policy approach that is appropriate to their district. The Council has considered this matter at seminars on 14 July and 5 October 2005 and a proposal for a draft policy was considered at the latter meeting.
6. Information has been obtained that indicates the Christchurch area generally lies in an intermediate seismicity zone at a distance from a zone of high activity but earthquake sources are present in the region and could cause significant damage in the area.
7. The preferred option set out in the draft policy is one which takes into account the need to obtain further information on the extent to which buildings in the area need to be earthquake strengthened to meet the standard now required under the Building Act, priorities for dealing with dangerous and insanitary buildings, and considerations of applying the policy to heritage buildings.
8. The priorities/timeframe proposed for the strengthening of identified earthquake-prone buildings is in accordance with the guidance provided by the Department of Building and Housing (DBH). Buildings will be categorised in accordance with AS/NZS 1170.2002 and there will be different timeframes for different categories of building. For example, it is proposed that buildings in the lowest risk/least important category will have 30 years to take action to strengthen or demolish the building, while buildings in the highest risk/most important category will have 15 years.
9. The adoption by the Council of the recommended policy does not of itself commit the Council to any financial expenditure on its own buildings or any other buildings (including heritage buildings) to meet the policy.
10. A similar policy is being recommended to BPDC for public notification, although submissions on the BPDC policy will be heard by CCC after reorganisation takes place in March next year.

FINANCIAL AND LEGAL CONSIDERATIONS

Financial

11. The direct cost of the desktop exercise of the preferred option to undertake the desktop study and initial evaluation over the next five years is estimated to be around \$140,000 per year which is currently unbudgeted. If the option to undertake proactive inspections of all buildings to assess whether they were dangerous or insanitary is adopted the additional cost per year is estimated to be \$990,000.
12. It is difficult to estimate the economic cost of the policy before the database of possible earthquake buildings is developed. This information will be available at the time of the first five yearly review period. In 2002 the Department of Internal Affairs commissioned a "Report on Cost Benefit of Improving the Performance of Buildings in Earthquakes" by David C Hopkins and George Stuart. For Christchurch this report estimated the NPV of the cost to the Christchurch community of strengthening to 33% of current code to be \$97.2 million and the cost, within that figure, of strengthening pre-1935 buildings was \$50.8 million. This can be compared with the annual value of building consents issued of \$869 million.

Legal

13. The Building Act requires the Council to adopt a policy on dangerous, earthquake-prone, and insanitary buildings by 31 May 2006.
14. The Building Act's requirement that the Council have such a policy raises potential liability issues for the Council. These are:
 - the possibility of personal injury claims;
 - negligence and/or breach of statutory duty claims;
 - judicial review proceedings;
 - proceedings for injunctions or determinations.
15. On 21 September 2005, Local Government New Zealand obtained a legal opinion, (the opinion), from Simpson Grierson in relation to the liability issues for TAs in developing and adopting earthquake-prone buildings policies, and analysing the guidance provided by DBH on this policy. Judith Cheyne was the author of the opinion and is now on secondment to the Council's Legal Services Unit from Simpson Grierson.
16. Local Government New Zealand requested the opinion in relation to the liability issues for all TAs to assist them in developing and adopting their earthquake-prone buildings policies. The opinion has been prepared in such a manner that it is applicable for all TAs. The Council's Legal Services Unit has carefully considered this advice and recommends that the Council adopt the approach outlined in the advice, as it represents the lowest possible risk for the Council.
17. The guidance material from DBH notes that an active policy approach, involving a planned programme of initial evaluations, more detailed assessments and timetables and guidelines for upgrading, will provide territorial authorities "*with the best possible risk reduction programme*" in their communities. A passive approach "*has the significant disadvantage that it relies on a somewhat haphazard order of remediation based essentially on an owner's intention for a building ... (which) could leave some significant high-risk buildings untouched for a long period of time.*" The DBH guidance also recognises that a combined approach is possible.
18. Although the opinion relates to the earthquake-prone section of the policy, and examines the model policy and guidance from the DBH in relation to earthquake-prone buildings only, the principles and advice are also generally applicable to dangerous and insanitary buildings.

19. Simpson Grierson advise that provided the Council follows the decision-making and special consultative procedures set out in the Local Government Act 2002, and has regard to relevant matters, including the principles in section 4 of the Building Act in developing and adopting the policy, there is a low risk of liability to the Council.
20. The policy attached to this report has been drafted with regard to the principles in section 4, the matters required to be included in the policy under section 131 (approach, priorities and heritage buildings), and the procedure for adopting the policy is being carried out in accordance with the special consultative procedures set out in the Local Government Act 2002.
21. The opinion recommends that either an active, or a combined active and passive approach should be taken in a policy as the most appropriate and compliant with the Building Act, because of the implied obligations in the Building Act (principally from section 124) that the TA will take positive action in relation to earthquake-prone, dangerous and insanitary buildings.
22. There are three possible options outlined later in this report. Option 1 is the preferred option and is included in the draft policy. Both options 1 and 2 propose a combined active and passive approach, and, based on the advice in the opinion, they will attract the lowest possible risk. Option 1 takes a mainly active approach in relation to earth-quake prone buildings, and a more passive approach for dangerous and insanitary buildings, while option 2 takes a more active approach to all types of building (and the same approach as option 1 for heritage buildings, to apply a special recovery management plan). Option 3, which proposes a more passive approach for earthquake-prone buildings, also presents a relatively low risk of liability.
23. The opinion advises that the potential for liability is low (after considering the possible types of claims, and the matters to be considered in the decision making process), even if a Council adopts a passive approach in its policy.
24. The opinion suggests, however, that, in relation to earthquake-prone buildings, a purely passive policy (responding only when a complaint or a building consent application is made) may not be appropriate, in light of the implied obligations on a TA in the Building Act.
25. The opinion notes that possible options for a combined active and passive approach include a desktop review of building stock as an initial step in a more passive policy, or including longer timeframes for investigation and upgrading programmes than are provided for in DBH's model policy (which is an active policy). The opinion also notes that factors like a region's seismicity and the financial resources available to a Council, will impact on the appropriate approach and priorities/timeframes adopted by particular Councils. These are matters that are considered later in this report.
26. In relation to dangerous and insanitary buildings a passive approach is more likely to be an appropriate response. DBH guidance recently provided on dangerous and insanitary buildings policies acknowledges that individual TA circumstances and the local economic, social and other factors will have an impact, and it is unlikely that attempts to proactively identify dangerous and insanitary buildings across the whole of a territorial authorities building stock would be possible unless an authority has considerable resources available to undertake regular inspections and evaluations of these buildings. In comparison, the potential earthquake-prone building stock is more limited, which is why a more active approach is possible.
27. In relation to priorities/timeframes, the opinion agrees with the factors DBH note in their guidance material should be considered, such as the numbers of public buildings, types and ages of buildings, etc and these are matters considered later in this report. The opinion also notes that the timeframes ultimately included in the policy will depend on the community's view, as a result of the consultation.
28. With regard to the level of strengthening for buildings that the earthquake-prone section of the policy requires/refers to, the opinion suggests that Council policies do not require a blanket strengthening to 67% of the new building standard, as the New Zealand Society of Earthquake Engineers (NZSEE) recommend. This is because a Council cannot directly enforce its policy.

29. Enforcement powers in relation to dangerous, earthquake-prone and insanitary buildings is through section 124 of the Building Act and if the Council serves a notice requiring work to be done under section 124, it can only seek that work be done which will mean the building is no longer earthquake-prone.
30. The level at which buildings are identified as earthquake-prone is where an earthquake would generate shaking of the building one-third (or 33%) as strong as the earthquake shaking for a new building at that site. The opinion suggests that Councils keep policy statements on the level of strengthening required reasonably general, concentrating on the detail as to how it will go about deciding what level of strengthening is required in individual circumstances. Heritage buildings are one area where a different level of strengthening to that for an ordinary building may be appropriate. The draft policy only includes general statements regarding the level of strengthening that will be required.
31. Considering the discussion in the paragraphs above the Legal Services Unit advice is that Council adopt a combined active and passive approach to the policy and that it support the preferred option recommended in this report.
32. In relation to heritage buildings, the Council adopted the *City of Christchurch Heritage Conservation Policy* in 1999 and the *Heritage Values + Vision + Mission Statement* in April 2004.
33. In making decisions about heritage buildings, the Council must also be cognisant of s6(f) in the Resource Management Act 2003, which elevates heritage to a matter of national importance.

STAFF RECOMMENDATIONS

It is recommended:

- (a) That the Council adopt the Draft Earthquake-prone, Dangerous, and Insanitary Buildings Policy (the Draft Policy) and the summary of information attached to this report.
- (b) That the Draft Policy be made available for public inspection at all Council Service Centres, Council libraries and on the Council's website.
- (c) That public notice of the proposal be given in 'The Press' and in the 'Christchurch Star' newspapers and on the Council's website on Saturday 17 December 2005.
- (d) That the summary of information be distributed by way of publication (together with the public notice of the proposal) in 'The Press' and in the 'Christchurch Star' newspapers and on the Council's website on Saturday 17 December 2005.
- (e) That the period within which written submissions on the proposal may be made to the Council be between Monday 19 December 2005 and Friday 24 February 2006.
- (f) That a Subcommittee of the Council be appointed hear submissions on the Draft Policy in March 2006 and report back directly to the Council at a meeting in the last week of April 2006.
Note: The Council will also be hearing Banks Peninsula District Council submissions as the merged Council by this time.
- (g) That the report from the Subcommittee and proposal for adoption of the policy be considered at the meeting of the Council on 18 May 2006 in order that the policy may come into effect on 31 May 2006 as required by the Building Act 2004.

BACKGROUND ON EARTHQUAKE-PRONE BUILDINGS POLICY, DANGEROUS BUILDINGS AND INSANITARY BUILDINGS POLICY

34. The Building Act 2004 requires territorial authorities to adopt a policy on dangerous, earthquake-prone, and insanitary buildings by 31 May 2006.
35. Section 4 of the Building Act sets out the principles to be applied by the Council when performing its functions, duties and powers under the Act.
36. Section 4(2)(d) and (l) provide:
- “(2) *In achieving the purpose of this Act, a person to whom this section applies must take into account the following principles that are relevant to the performance of functions or duties imposed, or the exercise of powers conferred, on that person by this Act:*
- (d) *the importance of recognising any special traditional and cultural aspects of the intended use of a building;*
- (l) *the need to facilitate the preservation of buildings of significant cultural, historical, or heritage value.”*
37. The policy requirements are set out in section 131 of the Act and must include:
- (a) The approach that the territorial authority will take in performing its functions under the Act, and
- (b) The territorial authority’s priorities in performing those functions; and
- (c) How the policy will apply to heritage buildings
38. The Government’s policy objective in regard to earthquake-prone buildings (EPBs) seeks to reduce the earthquake risk to the **public** over time and targets the most vulnerable buildings.¹
39. In addition to the requirements under the Act the adopted Community Outcomes include the following
40. Under **A Safe City** Risks from hazards are managed and mitigated.
We will know we are exceeding when: *We are well prepared for natural hazards*
41. Under **An Attractive and Well-designed City** Our lifestyles and heritage are enhanced by our urban environment.
We will know we are exceeding when: *Our heritage is protected for future generations.*

EARTHQUAKE RISK FOR CHRISTCHURCH CITY

42. The regulations related to this matter ² define, for the purpose of section 122 of the Act, moderate earthquake means, in relation to a building, an earthquake that would generate shaking at the site of a 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.
43. The seismic hazard in Christchurch was reviewed in an Institute of Geological and Nuclear Sciences Limited report in 2003. That report stated:

*Early studies of the seismic hazards affecting Christchurch indicated a relatively high seismic hazard level, only marginally lower than that of Wellington. More recent studies, however, indicate a lower level of hazard that is more in keeping with the location and activity of all earthquake sources (i.e. both close-in distributed seismicity sources and known fault sources). The recent results are also more consistent with the historical record than the earlier ones, and have been used as the basis of our study. During its 160-year recorded history Christchurch has not experienced MM8 shaking, and only occasionally have spot intensities of MM7 been observed.*³

¹ “The provisions of The Building Act 2004 in relation to EPBs reflect the government’s broader concern with the life safety of the public in buildings and, more particularly, the need to address life safety in an earthquake.” Clause 3.1.1 in *Earthquake-Prone Building Provisions of The Building Act 2004 – Policy Guidance for Territorial Authorities*, Department of Building and Housing, June 2005,

² Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005

³ Cousins, J., *Earthquake, volcano and tsunami risks to property of Christchurch City Council*, Institute of Geological and Nuclear Sciences Ltd, 2003

44. A recent overview of the earthquake risk for the city, including estimates of damage to buildings and human casualties, has been prepared by Geological and Nuclear Sciences. Dr Jim Cousins of Geological and Nuclear Sciences Limited.⁴ This indicates that Christchurch lies in an intermediate seismicity zone some distance from a zone of high activity. However, known earthquake sources, in particular the Ashley, Springbank and Pegasus fault zones, are present within the region and are large enough and close enough to cause significant damage throughout the city. From this study, losses and casualties have been estimated as follows:

Return Period (years)	Loss (\$ millions)	Casualties
100	190	0
500	750	6
1000	1200	16

PRESENT EARTHQUAKE STRENGTHENING POLICY

45. The Council's current policy applying to earthquake strengthening⁵ is based on the requirements of the Building Act 1991. The earthquake-prone definition for unreinforced masonry buildings applies to resistance of approximately 10% of current Code load requirements. At present the Council enforces this requirement when a building is brought to its attention through a building consent, or attention to the unsafe condition of building. The above standard has been applied when alterations not involving a change of use are made but when change of use occurs they are required to be brought up to a standard as nearly as reasonably practicable as if they were new buildings. These provisions have been applied to a number of buildings since their introduction. However, the minimum standard under the Act today is considerably more stringent, at 33% of the load requirements for new buildings.

EARTHQUAKE PRONE BUILDINGS

46. The legislation relating to EPBs seeks to reduce the level of earthquake risk to the public over time and targets the most vulnerable buildings. While the Act requires each TA to develop its own EPB policy, the legislation does not prescribe any particular policy form or approach. Rather, TAs and their communities must develop a policy approach that is appropriate to their district.
47. The Building Act 2004 replaces the Building Act 1991 with the following key changes with respect to EPBs:
- (a) The definition of an earthquake-prone building as set out in section 122 of the Building Act 2004 is significantly more extensive and is now applied to all buildings, excluding most residential buildings regardless of construction. It is no longer restricted to buildings of unreinforced masonry.
 - (b) The Building Act's definition of a moderate earthquake, on which a building's EPB status depends, is now based on the current design Standard rather than the 1965 Standard. In particular, all buildings, except for small residential dwellings, are to be considered earthquake-prone when they are below 33 percent of building code requirements.
48. For the purposes of the Building Act 2004, a building is earthquake-prone 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; 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. The definition does not apply to buildings used mainly for residential purposes, unless they have 2 or more storeys **and** 3 or more household units .

⁴ Cousins, J., *Estimated damage and casualties from earthquakes affecting Christchurch*, Institute of Geological and Nuclear Sciences Ltd, Client Report 2005/057, May 2005

⁵ *Building Code Policy on Earthquake Strengthening*, Environmental Services Unit, July 1998

49. The level at which buildings are identified as earthquake-prone is where an earthquake would generate shaking of the building one-third (or 33%) as strong as the earthquake shaking for a new building at that site. The opinion suggests that Councils keep policy statements on the level of strengthening required reasonably general, concentrating on the detail as to how it will go about deciding what level of strengthening is required in individual circumstances. Heritage buildings are one area where a different level of strengthening is required to that for an ordinary building may be appropriate. The draft policy only includes general statements regarding the level of strengthening that will be required.

POSSIBLE NUMBERS OF BUILDINGS AFFECTED BY THE CHANGE IN REGULATIONS

50. In an attempt to obtain some indication of the number of buildings that may be affected by the new requirements, Geographical Information Systems (GIS) were asked to provide a summary of the number of buildings in the City built pre-1930 to today. This information is tentative and property files still need to be examined in order to isolate the premises that may need further consideration. For the purposes of this investigation it is assumed that buildings built after 1979 should comply with the "new building" standard.

Building Dates for Christchurch City

Date Built (decade)	Number of Buildings
Pre 1930	2954
1930 to 1939	897
1940 to 1949	911
1950 to 1959	1743
1960 to 1969	2469
1970 to 1979	3617
Date unknown	3815
Total	16406*

* The findings exclude residential buildings of one storey, and those that are 2 or more storeys which have fewer than 3 household units.

51. As in the table, it is estimated that approximately 16,406 Christchurch buildings are potentially affected by the changes under the Act.

DANGEROUS BUILDINGS

52. The Building Act 2004 reduces the threshold test for dangerous buildings. For the purposes of the Act, a building is dangerous if:
- In the ordinary course of events (excluding the occurrence of an earthquake), the building is likely to cause (i) injury or death (whether by collapse or otherwise) to any persons in it or to persons on other property; or (ii) damage to other property; or
 - in the event of fire, injury or death to any persons in the building or to persons on other property is likely because of fire hazard or the occupancy of the building. Current practice is to respond to complaints from the public or notification from the Fire Service by investigating and reviewing the building and taking action as appropriate.
53. In the case of "dangerous buildings", data is available for the calendar years of 2003, 2004 and 2005 to April. As in the table below, between 2003 and May 2005, 26 buildings in Christchurch City were classified as dangerous. A further nine were deemed dangerous as the result of fire damage.

Dangerous Buildings in Christchurch City

Year	Number of Buildings
2003	13 dangerous buildings, plus 8 due to fire damage
2004	11 dangerous buildings, plus 1 due to fire damage
2005	2 dangerous buildings

INSANITARY BUILDINGS

54. For the purposes of the Act, a building is insanitary if the building:
- (a) is offensive or likely to be injurious to health because, (i) of how it is situated; or (ii) it is in a state of disrepair; or
 - (b) has insufficient or defective provisions against moisture penetration so as to cause dampness in the building or in any adjoining building; or
 - (c) does not have a supply of potable water that is adequate for its intended use; or
 - (d) does not have sanitary facilities that are adequate for its intended use.
55. The current practice is to respond to complaints or issues brought to the Council's attention by investigation and taking action under either the Building Act provisions or the Health Act as appropriate. There have been three cleansing orders in the last two years issued under the Health Act for buildings considered insanitary.

HERITAGE BUILDINGS

56. With regard to heritage buildings, the Council prioritises both the protection of people and heritage buildings and structures. In particular, while upgrading to the new Building Act 2004 level of 33% may protect loss of life and minor damage, higher levels of upgrading may be necessary to ensure the protection of heritage fabric from irretrievable earthquake damage. Upgrading to 67% of code is likely to afford a level of protection that may enable repair of heritage fabric rather than demolition or reconstruction. The provisions of section 4(2) (d) and (l) of the Act must be considered in these circumstances.⁶
57. This raises the following issues:
- (a) Firstly, with respect to the requirements for earthquake-prone buildings, a higher level of protection for heritage buildings than that required to mitigate risks to human health may be necessary.
 - (b) Secondly, with respect to the requirements for dangerous or insanitary buildings, specific provisions for heritage buildings to avoid pre-emptive demolition and further damage may be necessary.
 - (c) Finally, it will be important to ensure that any new or additional regulations for the upkeep of heritage buildings does not undermine the economic viability of preservation activity. In addition, any upgrading to protect heritage fabric must be undertaken in a manner that is compatible with the existing fabric and values that upgrading seeks to protect.
58. In the management of heritage buildings considered dangerous or insanitary, appropriate policies and management are essential to ensure heritage protection that calls on advice from professionals with expertise in heritage, engineering and conservation architecture. In such cases, specialist recovery management plans will be applied that seek the preservation of the heritage fabric.
59. For the purposes of this policy, all heritage buildings and other structures currently included in the City Plan and/or the Historic Places Trust Register should be covered by this policy. Future inclusions on these lists will automatically be covered.
60. At present, approximately 550 buildings are listed on the City Plan heritage list. Of these, approximately 372 are affected by the seismic upgrading requirements of the Act. A report⁷ prepared on the cost estimates for the upgrading the 372 earthquake prone heritage buildings to meet BA 2004 earthquake requirements states that 'the likely strengthening cost for the 372 currently listed heritage buildings to be in the order of \$250M. This estimate is based on a sample of 50 earthquake prone heritage buildings currently listed in the Christchurch City Plan and estimated strengthening cost for buildings based on construction types, number of stories and the heritage group listing⁸.

⁶ Section 4(2) (d) *the importance of recognising any special traditional and cultural aspects of the intended use of a building;*, and (l) *the need to facilitate the preservation of buildings of significant cultural, historical, or heritage value:*

⁷ 'Heritage Earthquake Prone Building Strengthening Cost Study', prepared for Christchurch City Council, draft report, November 2005. A structural engineering report prepared by Holmes Consulting Group.

⁸ Costings are very sensitive to base strengthening rate and the strengthening level modification factor adopted as it is directly proportional to these values.

61. The resulting cost to strengthen all 372 buildings to 33% FCC is \$165M and to strengthen all buildings to 67% FCC is \$415M. In reality, it could be assumed that only 1/3 of the buildings would be strengthening to 67% FCC'. Holmes Consulting Group Report to CCC. This sum does not include associated extras costs such as tidying and making good, tenant fit-outs (assumed at tenant's cost), and other building upgrading works to meet change in use requirements, including fire egress and fire rating, disabled access and facilities.
62. To assist private heritage building owners in the mitigation of earthquake risks to heritage building fabric, and the proposed 25 year time frame for the implementation of seismic upgrading to heritage buildings, the Council could consider establishing an annual targeted seismic upgrading incentive fund of \$1M⁹ to off-set seismic upgrading costs as well as Council backed low/no interest loans to heritage building owners.
63. Council assistance could be prioritised on the basis of building heritage value and risk¹⁰ as follows¹¹:
 - (a) For lower heritage value and/or lower risk heritage buildings (groups 3 and 4 and possibly group 2 in the City Plan heritage list), Council backed low or no interest loans to building owners to fund seismic upgrading works.¹²
 - (b) For high heritage value (group 1 and possibly group 2 in the City Plan heritage list) and/or high risk heritage buildings, Council \$1M annual direct Council grant funding as well as Council backed low/no interest loans.
64. To ensure accountability for Council incentive grant or loan assistance to heritage building owners, recipients would need to agree to a heritage covenant, and the development and implementation of a conservation plan, building maintenance plan and implementation of a cyclical maintenance programme. In order to continue to receive Council financial assistance recipients will need to report back to Council every 3 years on an output basis. Penalties for non-compliance or non- performance could include the withdrawal or repayment of funding assistance.
65. How the Council gives effect to the heritage provisions of the policy will be the subject of a separate report to the Council.

STAKEHOLDER CONSULTATION

66. Pre-consultation meetings were undertaken with representatives of a number of groups of stakeholders to explain the policy requirements of the Act. While a number of invitees did not attend, those who did raised a number of matters they considered necessary to address.¹³
67. Concerns were expressed regarding the economic impacts of the possible requirements and the relationship to timeframes within which assessments and strengthening would be required.
68. In the case of heritage buildings, the importance of protecting the fabric of the heritage buildings *in addition to* human life was raised. There are two aspects to this matter:
 - (i) The perceived need to require a greater level of earthquake proofing than the 33% minimum required under the Act;
 - (ii) Balancing the economic costs of retention against other social, cultural and economic benefits of retention.

⁹ Given the 25 year implementation timeframe in which to undertake seismic upgrading to heritage buildings, which is a requirement of this policy, the estimated annual indicative upgrading cost will be \$10M.

¹⁰ Risk to heritage buildings is likely to vary according to individual circumstances and could include development driven threats or threats from other causes including loss of viable ongoing use or neglect/loss of heritage values due to neglect or deferred maintenance.

¹¹ Timeframe recommendations are made with reference to cash flow considerations for Council and private building owners; professional capacity to undertake the breadth of estimated work; and, Council's capacity to assist private heritage building owners in meeting projected costs of strengthening.

¹² Loan availability subject to Council lending criteria yet to be developed. Agreement to Council loans to be determined on a case-by-case basis. Council will set a lower and upper loan limit.

¹³ Unedited notes from three meetings were provided at the October seminar.

69. It was also considered necessary to take an initial risk assessment overview of listed heritage buildings to better enable the Council to understand the implications of possible policy options and their implementation. Initial seismic upgrading costings can be used to prioritise, scope and stage the likely cost to heritage building owners and the community. It was suggested that the Council would also need to consider developing a range of education, communication and facilitation strategies to off-set these costs through direct and indirect incentive programmes for heritage protection.

OPTIONS

70. Three policy options have been identified. A table summarising each option is attached to this report. The "do nothing" option is not considered valid because there is a legislative requirement to adopt a policy.

Each option includes:

- (a) The **approach** that the Christchurch City Council will take in performing its functions under the Building Act;
 - (b) The **priorities** of the Christchurch City Council in performing those functions;
 - (c) How the policy will apply to **heritage** buildings.
71. The options that were put forward for consideration for earthquake-prone buildings, dangerous and insanitary buildings are as follows:

Option 1 (the preferred option)

Earthquake-prone buildings

A desk-top study will be done by the end of 2006 to establish a database of buildings likely to be earthquake prone. The buildings would be categorised into classes using table 3.2 of AS/NZS 1170.2002.

The data would be recorded on the property file as likely to be earthquake prone and the owner notified and given the opportunity to carry out an independent study to establish if the building is earthquake prone. After completing the desktop study in 2006, work to review buildings using the initial evaluation process developed by the NZSEE would begin and action would follow the outline implementation programme in the DBH template.

When an application for a consent for a significant alteration to a building is received and the building has an earthquake prone strength of less than 10% of the Code, the building would be required to be strengthened to at least 33% of Code as part of the consent.

Owners of buildings with a strength between 10% and 33% would be given consent for alterations and would be served with a notice under section 124 of the Building Act requiring action within the timetable in the outline implementation programme.

When an application for a consent involving a change of use is received the requirements of the Building Act for the building to be strengthened to as near as is reasonably practicable the strength of a new building would be followed. In considering heritage buildings apply considerations as included in Part 4 section 5 (d) and (l) of the Act.

Heritage buildings

For earthquake-prone, dangerous or insanitary heritage buildings, specialist recovery management plans will be applied that seek the preservation of the heritage fabric as well as human life and other property. The provisions of Sections 4(2)(d) of the Act must be considered in such circumstances.

Dangerous and Insanitary buildings

Dangerous buildings would be investigated on receipt of advice from the Fire Service or when the building came to notice and action taken using Section 124 or 129 of the Building Act as appropriate. Insanitary buildings would be inspected to determine necessity for action on receipt of complaints and action taken using section 124 and 129 of the Building Act as appropriate.

Option 2

Earthquake-prone buildings

A desk-top study will be done by the end of 2006 to establish a database of buildings likely to be earthquake prone. The buildings would be categorised into classes using table 3.2 of AS/NZS 1170.2002.

The data would be recorded on the property file as likely to be earthquake prone and the owner notified and given the opportunity to carry out an independent study to establish if the building is earthquake prone. After completing the desktop study in 2006, work to review buildings using the initial evaluation process developed by the NZSEE would begin and action would follow the outline implementation programme in the DBH template.

When an application for a consent for a significant alteration to a building is received, the building owner would be required to provide a report on the strength of the building and if the building strength was less than 33% of current Code the building would be required to be strengthened to at least 33% of Code as part of the building consent.

When an application for a consent involving a change of use is received the requirements of the Building Act for the building to be strengthened to as near as is reasonably practicable the strength of a new building will be followed.

Heritage buildings

For earthquake-prone, dangerous or insanitary heritage buildings, specialist recovery management plans will be applied that seek the preservation of the heritage fabric as well as human life and other property. The provisions of Sections 4(2)(d) of the Act must be considered in such circumstances.

Dangerous and Insanitary buildings

Buildings will be inspected by a team of inspectors to ascertain if they could be considered dangerous or insanitary. The priority for inspection will be established based on occupancy numbers and whether the building is used for sleeping accommodation.

If an inspection showed the building to be dangerous or insanitary, action will be taken using section 124 or 129 of the Building Act as appropriate.

Buildings will also be investigated on receipt of advice from the Fire Service and action taken as appropriate under section 124 or 129 of the Building Act.

Option 3

Earthquake-prone Buildings

A desk-top study will be done by the end of 2006 to establish a database of buildings likely to be earthquake prone. The buildings would be categorised into classes using table 3.2 of AS/NZS 1170.2002.

The data would be recorded on the property file as likely to be earthquake prone and the owner notified and given the opportunity to carry out an independent study to establish if the building is earthquake prone.

When an application for a consent for an alteration to the building involving significant upgrading or increase in occupancy was received, the owner would be required to strengthen the building to at least 33% of Code.

When an application for a consent involving a change of use is received the requirements of the Building Act for the building to be strengthened to as near as is reasonably practicable the strength of a new building will be followed.

Heritage buildings

In this option, heritage buildings are managed in all aspects in the same manner as all other buildings

Dangerous and Insanitary buildings

Dangerous buildings would be investigated on receipt of advice from the Fire Service or when the building came to notice and action taken using Section 124 or 129 of the Building Act as appropriate. Insanitary buildings would be inspected to determine necessity for action on receipt of complaints and action taken using section 124 and 129 of the Building Act as appropriate.

ASSESSMENT OF OPTIONS

The Preferred Option (Option 1)

Earthquake-prone buildings

- When an application for a consent for a significant alteration to a building is received and the building has an earthquake prone strength of less than 10% of the Code, the building would be required to be strengthened to at least 33% of Code as part of the consent.
- Owners of buildings with a strength between 10% and 33% would be given consent for alterations and would be served with a notice under section 124 of the Building Act requiring action with the timetable in the outline implementation programme.
- When an application for a consent involving a change of use is received the requirements of the Building Act for the building to be strengthened to as near as is reasonably practicable the strength of a new building would be followed.

Heritage buildings

- For earthquake-prone, dangerous or insanitary heritage buildings, specialist recovery management plans will be applied that seek the preservation of the heritage fabric as well as human life and other property.

Dangerous and insanitary buildings

- Dangerous buildings would be investigated on receipt of advice from the Fire Service or when the building came to notice and action taken using Section 124 or 129 of the Building Act as appropriate. Insanitary buildings would be inspected to determine necessity for action on receipt of complaints and action taken using section 124 and 129 of the Building Act as appropriate.

	Benefits (current and future)	Costs (current and future)
Social	Reduced risk to human life and property. Enables programmed improvements with building use continuance.	Limited effects on building continued use.
Cultural	Preservation of City heritage buildings and structures. Improvement in amenity of buildings and retention of overall city identity.	Retention of heritage buildings and structures able to be programmed as finances become available but could limit uses and changes.
Environmental	Avoidance of significant damage to urban infrastructure.	Reduction in city revitalisation and modernisation.
Economic	Enables building owners to programme improvements to fulfil policy over time.	Maintenance and strengthening costs for earthquake-prone, dangerous or insanitary buildings.

Extent to which community outcomes are achieved:

Primary alignment with Community Outcome **A Safe City**, particularly, *Risks from hazards are managed and mitigated* and *People feel safe at all times in Christchurch City*.

Also contributes to **An Attractive and Well-designed City**, particularly, *Christchurch is attractive and well-maintained* and *Our Heritage is protected for future generations*.

Impact on Council's capacity and responsibilities:

The Council already has policy on earthquake strengthening (see below) and has a responsibility for enforcement of earthquake-prone, dangerous and insanitary buildings under the Building Act 2004. Potential increase in costs due to management of earthquake-prone buildings and possibility of providing financial support for strengthening of heritage buildings. However timetabling of requirements enables spread of costs over a lengthy period.

Effects on Maori:

None specific to this policy.

Consistency with existing Council policies:

The policy to be adopted by May 2006, will replace the existing Building Code Policy on Earthquake Strengthening, Environmental Services Unit, July 1998. Consistent with current approach for dangerous and insanitary buildings.

Views and preferences of persons affected or likely to have an interest:

Takes into account matters raised during stakeholder consultation. Provisions for giving special consideration to Heritage buildings would possibly meet the preferences of those interested in such matters.

Option 2

Earthquake-prone buildings

- When an application for a consent for a significant alteration to a building is received, the building owner would be required to provide a report on the strength of the building and if the building strength was less than 33% of current Code the building would be required to be strengthened to at least 33% of Code as part of the building consent.
- When an application for a consent involving a change of use is received the requirements of the Building Act for the building to be strengthened to as near as is reasonably practicable the strength of a new building would be followed.

Heritage buildings

- For earthquake-prone, dangerous or insanitary heritage buildings, specialist recovery management plans will be applied that seek the preservation of the heritage fabric as well as human life and other property.

Dangerous and insanitary buildings

- Buildings would be inspected by a team of inspectors to ascertain if they could be considered dangerous or insanitary. The priority for inspection would be established based on occupancy numbers and whether the building was used for sleeping accommodation.
- If an inspection showed the building to be dangerous or insanitary, action would be taken using section 124 or 129 of the Building Act as appropriate.
- Buildings would also be investigated on receipt of advice from the Fire Service and action taken as appropriate under section 124 or 129 of the Building Act.

	Benefits (current and future)	Costs (current and future)
Social	Reduced risk to human life and property.	Potential disruption to building use during maintenance, strengthening or sanitising.
Cultural	Preservation of city heritage buildings and structures. Improvements in reducing dangerous and insanitary buildings. Improvement in amenity of buildings and retention of overall city identity.	Retention of heritage buildings and structures able to be programmed as finances become available but could limit uses and changes.
Environmental	Avoidance of significant damage to urban infrastructure. Improvements in reducing dangerous and insanitary buildings.	Reduction in city revitalisation and modernisation.
Economic	Avoidance of replacement costs for building owners.	Maintenance and strengthening costs for earthquake-prone, dangerous or insanitary buildings. Ability of the construction industry to undertake the improvements could increase costs.

Extent to which community outcomes are achieved:

Primary alignment with community outcome **A Safe City**, particularly, *Risks from hazards are managed and mitigated* and *People feel safe at all times in Christchurch City*.

Also contributes to **An Attractive and Well-designed City**, particularly, *Christchurch is attractive and well-maintained* and *Our Heritage is protected for future generations*.

Impact on Council's capacity and responsibilities:

Significant increase in staff required to administer provisions of the policy and hence costs to the Council.

Effects on Maori:

None specific to this policy

Consistency with existing Council policies:

The policy to be adopted by May 2006, will replace the existing Building Code Policy on Earthquake Strengthening, Environmental Services Unit, July 1998. Consistent with current approach for dangerous and insanitary buildings.

Views and preferences of persons affected or likely to have an interest:

Provisions for giving special consideration to Heritage buildings would possibly meet the preferences of those interested in such matters.

Option 3

Earthquake-prone buildings

- The data would be recorded on the property file as likely to be earthquake prone and the owner notified and given the opportunity to carry out an independent study to establish if the building is earthquake prone.
- When an application for a consent for an alteration to the building involving significant upgrading or increase in occupancy was received, the owner would be required to strengthen the building to at least 33% of Code.
- When an application for a consent involving a change of use is received the requirements of the Building Act for the building to be strengthened to as near as is reasonably practicable the strength of a new building would be followed.

Dangerous and insanitary buildings

- Dangerous buildings would be investigated on receipt of advice from the Fire Service or when the building came to notice and action taken using Section 124 or 129 of the Building Act as appropriate. Insanitary buildings would be inspected to determine necessity for action on receipt of complaints and action taken using section 124 and 129 of the Building Act as appropriate.

Heritage buildings

- In this option, heritage buildings are managed in all aspects in the same manner as all other buildings

	Benefits (current and future)	Costs (current and future)
Social	Reduced risk to human life and property to a limited scale	Possible increased costs of rebuilding should an earthquake occur in Christchurch in cases not caught by the requirements. Possible casualties increased
Cultural	Improvement in amenity of buildings and retention of overall city identity.	Greater possibility of structural damage to heritage buildings
Environmental	Avoidance of need for major construction work in areas with earthquake-prone buildings	Possible increase in damage to buildings in earthquake-prone groups
Economic	Initially lower costs for earthquake strengthening of potential earthquake-prone buildings.	Potential for greater costs in recovery of services should earthquake occur.

Extent to which community outcomes are achieved:

Does not fulfil community outcome **A Safe City**, particularly, *Risks from hazards are managed and mitigated and People feel safe at all times in Christchurch City.*

Does not contribute to **An Attractive and Well-designed City**, particularly, *Christchurch is attractive and well-maintained and Our Heritage is protected for future generations.*

Impact on Council's capacity and responsibilities:

Could be seen to fail to fulfil requirements of the Act.

Effects on Maori:

None specific to this policy

Consistency with existing Council policies:

The policy to be adopted by May 2006, will replace the existing Building Code Policy on Earthquake Strengthening, Environmental Services Unit, July 1998. Consistent with current approach for dangerous and insanitary buildings