WAIMATE DISTRICT COUNCIL

EARTHQUAKE-PRONE, DANGEROUS AND INSANITARY BUILDINGS POLICY

1. Introduction and background

Section 131 of the Building Act 2004 requires territorial authorities (TAs) to adopt a policy on earthquake-prone, dangerous and insanitary buildings.

In developing and adopting this policy, Council has followed the consultative procedure set out in section 83 of the Local Government Act 2002.

The Policy was formally adopted by Council at it's meeting on the 19th September 2006.

2 Policy Summary

Council has noted that provisions of the Building Act 2004 in regard to earthquake-prone, dangerous and insanitary buildings reflect the Government's broader concern for public safety and, in particular the need to minimise harm to people and property from buildings that are deemed to be dangerous, insanitary and earthquake prone.

This policy reflects the Council's determination to reduce risk in a way that is acceptable in social and economic terms to the community.

Council has adopted a reactive approach regarding this policy so that:

- Assessments of dangerous or insanitary buildings will be triggered if they come to Council's attention (through complaints or otherwise). The assessment will indicate what, if any,. further action is required.
- Assessments and improvements to the structural performance of buildings that are or could be earthquake-prone, will be triggered by an application for change of use under the Building Act. The Council may also make assessments of buildings that could be earthquake-prone upon receipt of an application for building alteration, extension of life or subdivision or when a complaint is received. If an assessment is done it will indicate what, if any, further action is required.

3 Dangerous and Insanitary Buildings

The definition of dangerous and insanitary buildings is set out in the Building Act 2004.

Section 121. Meaning of dangerous building
(1) A building is dangerous for the purposes of this Act if,—
- (a) 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
- (b) 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.

Section 123. Meaning of insanitary building
A building is insanitary for the purposes of this Act if the building—
- (a) is offensive or likely to be injurious to health because—
  - (i) of how it is situated or constructed; 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.

3.1 Identifying Assessing, and Prioritising Dangerous and Insanitary Buildings

If a building comes to Council's attention (through a complaint from the public or an external agency, advice from Council staff, or otherwise), it will:

- assess whether a building is 'dangerous' in accordance with section 121 or 'insanitary' in accordance with section 123 of the Building Act within 5 working days of receiving a bona fide complaint or information,
- follow this with seeking advice from members of the New Zealand Fire Service, where necessary.

Where the Council is satisfied a building is dangerous or insanitary it will also assess the level of risk to public health or safety that is presented.

The Council will give priority to buildings that have been determined to present such a high level of risk as to warrant immediate action to remove the risk.

Options for immediate action include:

- Prohibiting any person from occupying or using the building;
- If necessary, erecting barriers and warning signs, plus securing the building to prevent entry until such time as remedial action can be taken;
- Undertaking remedial action where there is immediate danger under s129 of the Building Act.

Note that, in the case of insanitary buildings, the Council reserves the right to use its powers available under s34 of the Health Act, 1956. Where the Council undertakes remedial action under either s129 of the Building Act or s34 of the Health Act, all costs will be recoverable from the building owner(s) as provided for in the relevant legislation.

In addition to remedial action, the Building Act 2004 also empowers the Council to prosecute building owners and the exercise of this power may also be considered by the Council.

3.2 Recording Dangerous and Insanitary Buildings

Whenever Council has information on a building that it is satisfied is dangerous or insanitary, the information will be included when a Land Information Memorandum (LIM) is issued by the Waimate District Council. The LIM will note any action taken under section 124 and the status of any requirement by the Council for improvements to the building, or the results of any improvements carried out, as applicable.

3.3 Taking Action on Dangerous and Insanitary Buildings

Council will discuss with the property owner options to minimise harm to other people / property. If necessary Council will act in accordance with sections 124, 125,126 and 129 of the Building Act if safety precautions have to be taken, which may include issuing notices under section 124(1)(c) requiring work to be done to reduce or remove the danger or to prevent the building from remaining insanitary.

4 Earthquake-prone Buildings

The definition of an earthquake-prone building is set out in section 122 of the Building Act 2004 and in the regulations that define moderate earthquake[1].

Section 122 .Meaning of earthquake-prone building

(1) A building is earthquake prone for the purposes of this Act if, having regard to its condition and to the ground on which it is built, and because of its construction, the building—
  (a) will have its ultimate capacity exceeded in a moderate earthquake (as defined in the regulations); and
  (b) would be likely to collapse causing—
    (i) injury or death to persons in the building or to persons on any other property; or
    (ii) damage to any other property.

(2) Subsection (1) does not apply to a building that is used wholly or mainly for residential purposes unless the building—
  (a) comprises 2 or more storeys; and
  (b) contains 3 or more household units.

Residential buildings in the Waimate District Council includes buildings used for boarding houses and home-stay accommodation where the building has fewer than six occupants.

4.1 Seismicity

Council does not have specific information on earthquake shaking intensities (Modified Mercalli) for several return periods. Such a study would cost about $10,000 concentrating on the effect of earthquakes from the Alpine Fault and local faults.

The Canterbury Regional Council has produced a report which contains general information such as fault lines throughout the Waimate District (there are no faultlines running directly through Waimate itself), but not specific hazard information for Waimate.

The Canterbury Regional Council at their cost intend to complete an earthquake hazard analysis for Waimate and Makikihi in the 2006/07 year.

Scientists predict that there is a 65% chance that there will be a magnitude 8 quake on the Alpine Fault over the next 50 years. This rupture would have a major and possibly devastation impact on the lives of people in the South Island and especially Canterbury and the West Coast.

4.2 Strengthening requirements

When a building is to be upgraded after having been assessed as being earthquake prone, the standard required for upgrading is determined by the NZ Building Code.

For practical purposes, Council will define EPBs as those that, when subject to moderate earthquake shaking, do not meet the criteria for ultimate limit state as defined in the loadings and materials Standards for new buildings. (Effectively, a building is earthquake-prone if it is below 33% of the structural strength requirements of the current building code standard for a new building.)

Waimate District Council will use the New Zealand Society of Earthquake Engineers (NZSEE) recommendations as its preferred basis for defining technical requirements and criteria. These recommendations are designed to be used in conjunction with AS/NZS 1170 Loadings Standard, NZS 3101 Concrete Structures Standard, NZS 3404 Steel Structures Standard and other materials Standards.

[1] The government has, in regulations, defined a moderate earthquake as 'in relation to a building, an earthquake that would generate shaking at the site of the building that is of the same duration as, but that is one-third as strong as, the earthquake shaking (determined by normal measures of acceleration, velocity and displacement) that would be used to design a new building at the site.'

4.3 Identifying and Assessing EPBs

Where a building consent application or certificate of acceptance application is received for building alteration, extension of life or subdivision, or bona fide information is received of a building that could be earthquake-prone, Council may require the owner to have an appropriately qualified structural engineer undertake an initial evaluation and/or a detailed assessment of the building's performance as part of the application process. The owner shall provide a copy of their report to Council, which shall be retained on the relevant property file. A detailed assessment would be required when an initial evaluation indicates the building is likely to be earthquake prone.

This requirement does not apply to buildings that have been structurally strengthened or have previously been subject to an initial evaluation or detailed assessment.

If an application for the change of use of a building is made then the Council is required, in accordance with section 115 of the Building Act 2004, to be satisfied, on reasonable grounds, that the building, in its new use, will comply, as nearly as is reasonably practicable with every provision of the building code that relates to the structural performance of the building (among other things). This means that, irrespective of whether a building is earthquake prone, any change of use of the building requires it to be upgraded to as near as is practicable to 100% of compliance with the building code.

4.4 Taking action on earthquake-prone buildings

If a change of use application is made the Council must require that the building be upgraded so that the building, in its new use, will comply as nearly as is reasonably practicable with every provision of the building code, if the building includes household units, or, in other cases, every provision of the building code relating to means of escape from fire, protection of other property, sanitary facilities, structural performance, fire-rating performance, and access and facilities for people with disabilities (if this is a requirement under section 118).

The Council, on receipt of a building consent application or certificate of acceptance application under the Building Act (for building alteration, extension of life, or subdivision), or if a bona fide complaint is made, or other information received by the Council in respect of a potentially earthquake prone building, may:

- Require an initial evaluation from the owner at their expense, to be undertaken by an appropriately qualified structural engineer,
- Require a detailed assessment from the owner at their expense if an initial evaluation indicates the building is likely to be earthquake prone. The detailed assessment is to be undertaken by an appropriately qualified structural engineer.
- Discuss with property owner options for action to minimise harm to other people / property including strengthening or removal.
- If necessary, act in accordance with sections 124, 125,126, and 129 of the Building Act if safety precautions have to be taken due to the information provided in the detailed assessment.
- Serve a formal notice under s 124 on the owner to strengthen or demolish the building within a time stated in the notice (in the event that discussions do not yield a mutually acceptable approach and proposal). If the owner objects to the notice being issued then the owner may apply to the Department of Building and Housing for a determination under s 177 of the Building Act 2004.

The circumstances in which the Council may take the above action on receipt of a building consent application or a complaint are:

- where the building in question is constructed of unreinforced concrete masonry;
- where the building work to be done/that has been done relates to the structural integrity of the building;
- when the building has an importance level of 3,4 or 5 under table 3.2 of AS/NZS 1170.0: 2002 (see Schedule A);and
- in any other situation where the Council sees fit.

(Also note that some buildings are excluded from this policy as detailed in Schedule B.)

4.5 Recording EPB Status and Access to Information

Council has decided that, given the size of the district, it will not keep a specific earthquake-prone buildings register, but for any building that is or may be earthquake-prone (following a building consent or certificate of acceptance application, or bone fide complaint being made), then information will be available on the relevant property file and will be included in any LIM for the property.

When a LIM is issued by Council it will indicate:

- If an initial evaluation has been completed and has found that a building may be earthquake prone;
- If a detailed assessment has been done resulting in the Council being satisfied the building is earthquake prone; and
- If a notice under section 124 has been issued and the date by which strengthening or demolition is required (if known).

4.6 Priorities

The required timeframe within which an owner will be required to strengthen or demolish a building that has been identified as earthquake prone (other than a change of use building, which must be strengthened immediately) is dependant on the building's current design status. The following table provides a guide to the timelines that the Council will apply for remedial work on identified earthquake-prone buildings:

Design code status	**Upgrade time frame**
33% + of current design code	No action required
25 – 32% of current design code	25 years
20 – 24% of current design code	20 years
< 20% of current design code	15 years

5 Heritage buildings

Council believes it is important that its heritage buildings have a good chance of surviving a major earthquake. However, Council does not wish to see the intrinsic heritage values of these buildings adversely affected by structural improvement measures.

Heritage buildings will be assessed in the same way as other potentially earthquake-prone, dangerous and insanitary buildings and discussions held with owners and the Historic Places Trust to identify a mutually acceptable way forward.

In the event that discussions with the owners and the Historic Places Trust do not yield a mutually acceptable approach and proposal, notice will be served requiring improvement or demolition within a time stated in the notice.

Schedule A.

TABLE 3.2
IMPORTANCE LEVELS FOR BUILDING TYPES-NEW ZEALAND STRUCTURES

Importance Level	Comment	Examples
1	Structures presenting a low degree of hazard to life and other property	Structures with a total floor area of <30m^2 Farm buildings, isolated structures, towers in rural situations Fences, masts, walls, in-ground swimming pools
2	Normal structures and structures not in other importance levels	Buildings not included in Importance Levels 1, 3 or 4 Single family dwellings Car parking buildings
3	Structures that as a whole may contain people in crowds or contents of high value to the community or pose risks to people in crowds	Buildings and facilities as follows: (a) Where more than 300 people can congregate in one area (b) Day care facilities with a capacity greater than 150 (c) Primary school or secondary school facilities with a capacity greater than 250 (d) Colleges or adult education facilities with a capacity greater than 500 (e) Health care facilities with a capacity of 50 or more resident patients but not having surgery or emergency treatment facilities (f) Airport terminals, principal railway stations with a capacity greater than 250 (g) Correctional institutions (h) Multi-occupancy residential, commercial (including shops), industrial, office and retailing buildings designed to accommodate more than 5000 people and with a gross area greater than 10 000 m^2 (i) Public assembly buildings, theatres and cinemas of greater than 1000 m^2. Emergency medical and other emergency facilities not designated as post-disaster Power generating facilities, water treatment and waste treatment facilities and other public utilities not designated as post-disaster Buildings and facilities not designated as post-disaster containing hazardous materials capable of causing hazardous conditions that do not extend beyond the property boundaries
4	Structures with special post-disaster functions	Buildings and facilities designated as essential facilities Buildings and facilities with special post-disaster function Medical emergency or surgical facilities Emergency service facilities such as fire, police stations and emergency vehicle garages Utilities or emergency supplies or installations required as backup for buildings and facilities of Importance Level 4 Designated emergency shelters, designated emergency centres and ancillary facilities Building and facilities containing hazardous materials capable of causing hazardous conditions that extend beyond the property boundaries
5	Special structures (outside the scope of this Standard-acceptable probability of failure to be determined by	Structures that have special functions or whose failure poses catastrophic risk to a large area (e.g. 100 km^2) or a large number of people (e.g. 100 000) Major dams, extreme hazard facilities

	special study)	

Schedule B - Exclusions

Having regard to section 122 of the Building Act 2004, buildings listed in this schedule are excluded from the evaluation and assessment requirements of section 4.3 and 4.4 of this policy as Council deems it unlikely they would fall within the definition of being earthquake prone as defined in the Building (Specified Systems, Change of Use and Earthquake-Prone Buildings) Regulations 2005 and/or the predominant use of the building is such that is unlikely to cause –

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

1. Single story farm buildings constructed since 1976 with a building consent or building permit.
2. Single story farm implement buildings or single story garages constructed with timber or steel framing.
3. Those buildings for which the applicant can provide certification from an appropriately qualified structural engineer that earthquake strengthening has already been completed to meet the safe limit as defined in section 4.1
4. Buildings that hold a code compliance certificate for earthquake strengthening so as to meet the safe limit as defined in section 4.1

The exclusions provided in this schedule will not apply if Council believes a building may be earthquake prone. Where Council believes a building, including any listed in this schedule, may be earthquake-prone, the process in section 4.4 shall be observed.