



Earthquake Prone Buildings

Background to Earthquake Prone Buildings Policy

A recent law change means that the requirements for strengthening buildings to prevent them collapsing during an earthquake have been expanded. The Building Act 2004 has increased the scope and number of buildings that may be earthquake prone and hence have to be checked and, where necessary, strengthened.

Design standards for buildings in earthquakes were first introduced in New Zealand in 1935 following the Napier earthquake. Significant advances in required standards have been made since with major changes made in 1965 and 1976. A number of existing buildings now fall short of the standard required for new buildings.

The Building Act requires councils to adopt a policy regarding earthquake prone buildings. Following public consultation, Wellington City Council adopted its Earthquake Prone Buildings Policy on 31 May 2006.

Buildings affected

The City Council's Earthquake Prone Buildings Policy affects all types of buildings except those used wholly or mainly for residential purposes unless they are two or more storeys high **and** contain three or more household units. This means it won't apply to the majority of the city's houses but might affect people who own apartments or flats in older buildings.

An earthquake prone building is defined in the regulations as a building whose strength is 33 percent or less of the current seismic loading standard (NZS 1170.5: 2004).

The Council has undertaken a building code comparison study and found that **buildings constructed after 1976 are unlikely to be earthquake prone.**

How Wellington City Council will identify earthquake prone buildings

STAGE 1

A preliminary review of city files has been undertaken. From the information gathered, the Council has identified approximately 3800 buildings requiring further assessment.

STAGE 2

The Council will use the Initial Evaluation Process (IEP) set out by the New Zealand Society for Earthquake Engineering to determine the structural performance score of these buildings. Buildings scoring less than 34 are considered to be potentially earthquake prone. The Council will pay for these initial evaluations, which will be carried out by appropriately qualified engineers. It may take up to three years to assess all potentially earthquake prone buildings.

STAGE 3

The Council will then write to owners of buildings with an IEP score of less than 34 advising that their building is potentially earthquake prone. Owners will then have six months to consider this assessment and provide any additional information about factors that might affect the strength of the building or a more detailed assessment of the structure. The information is publicly available on request.

STAGE 4

If after consideration of any further information provided in Stage 3, the Council is satisfied that the building is earthquake prone, it will advise the owner of the classification and issue a written notice under Section 124 of the Building Act 2004. This information will be held in a Council database of earthquake prone buildings, which will be available to the public.

STAGE 5





As building consents for structural strengthening are received and the strengthening work completed, the database will be updated to reflect the status of buildings as not earthquake prone.

Priorities for strengthening

Prioritisation is determined by:

- A building's importance, e.g. whether it has a post-disaster function, and
- Its age and condition relative to the code to which it was built or previously strengthened.

Table: Priority for assessing and strengthening earthquake prone buildings

IMPORTANCE LEVEL	BUILDING AGE AND CONDITION		
	Pre 1965 Pre NZS1900 Chapter 8: 1965 Standard	Pre 1976 NZS1900 Chapter 8: 1965 Standard	Critical structural weakness
1: Low degree of hazard <i>e.g. farm buildings and isolated structures, fences, walls</i>			
2: Not in other categories <i>e.g. most apartment buildings</i>			
3: Contain crowds or high value to the community <i>e.g. some schools, universities, medical centres</i>			
4: Highest priority with post-disaster functions <i>e.g. hospitals, civil defence centres, emergency shelters</i>			
KEY:  Passive  Low  Moderate  High			

Note: Critical structural weakness is defined as individual buildings built post-1976 (NZS 4203 structural design code) with an identified detailing deficiency that renders it earthquake prone.

Timeframe for strengthening

The maximum timeframes for undertaking strengthening work on a building that has been assessed as earthquake prone are:

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

Common questions asked by property owners

Can I buy or sell an earthquake prone building?

Yes. The new owner will become responsible for the seismic strengthening so it is advisable that purchasers undertake independent investigations prior to purchasing a property that is likely to be earthquake prone.

I need to find out whether a building is earthquake prone before the Council has done an IEP. What can I do?

You can approach an engineer to undertake an independent IEP (at your own cost). This will give you a guide as to the strength of the building. The Council maintains the right to review these findings.

I am doing renovations to an earthquake prone building. Do I have to strengthen my building at this time?

Only if the cumulative value of building work since 1 June 2006 is greater than one-third of the building's capital value. In this case, the building owner(s) will be required to undertake the structural design for strengthening and include in the building consent the complete strengthening work, or the strengthening work to the area affected by the building work (with an agreement to complete the full strengthening work within the maximum allowable time frame). Much of the cost of strengthening a building is in the making good of the décor, so it makes sense to do the strengthening work at the same time as planned building work.

I'm changing the use of my building. Does the Earthquake Prone Buildings Policy affect me?

The Building Act 2004 provisions regarding change of use are separate from those relating to earthquake prone buildings. When a change of use occurs, an upgrade of the structure of the building in its new use is required "as nearly as is reasonably practicable" with the current Building Code.

A building was earthquake prone under the old policy. How does the new policy affect this property?

Buildings with earthquake prone building notices issued under Section 66 of the Building Act 1991 have been issued with a notice under Section 124 of the Building Act 2004 requiring strengthening. Building work must begin within two years of the notice being issued.

What is a household unit?

Occupied, or intended to be occupied, exclusively as the home or residence of not more than 1 household. See section 7 of the 2004 Building Act for further clarification.

Can I dispute the classification of my building as earthquake prone?

You are entitled to produce your own engineer's report in order to challenge the result of an IEP. If you are unhappy with the Council's decision, you can ask the Department of Building and Housing to make a final, binding determination on whether your building is earthquake prone.

Can I challenge the time limit given for completion of strengthening work?

Yes. The Council has a hearings process in place to consider appeals against time limits.

"Buildings with less than one-third of the strength of a new building have about 10 to 20 times the risk of serious damage or collapse when compared to a new building."
(www.building.govt.nz)

For further information or to get a copy of the policy, please visit:

www.Wellington.govt.nz

Or contact:

**Building Consents and Licensing Services,
Wellington City Council
Level 1, 101 Wakefield Street, Wellington
Ph: (04) 499 4444**