



23 September 2011

Information for building owners: Earthquake-prone buildings

Wanganui District Council is working through a process to identify potentially earthquake-prone buildings and notify the owners of those buildings about their responsibilities.

The Building Act 2004 requires each territorial authority to have an earthquake-prone building (EQPB) policy for its district. The policy is intended to set out the approach that the territorial authority is taking with regard to earthquake-prone buildings, in particular the upgrade of buildings so that they are no longer earthquake-prone.

What does 'earthquake-prone' mean and does it apply to all buildings?

Essentially, an earthquake-prone building is an existing building that will have strength that is 33% or less of the seismic loading standard for new buildings.

A building designed to the current design standards would have at least 100% of New Building Strength (NBS). Existing buildings are assessed and given a %NBS.

If a building is less than 33% NBS, it is classed as earthquake-prone.

The technical definition of an earthquake-prone building is set out in Section 122 of the Building Act 2004.

Small residential buildings (houses) are exempt from the provisions of the Act.

Building design for earthquakes

- The objective of the Building Act and Building Code in respect of any size earthquake is to minimise the risk of harm to people.
- The 1929 Murchison and 1931 Hawke's Bay earthquakes had a profound effect on how we build to survive earthquakes.
- Building codes in 1935, 1965, 1976, 1984 and 1992 were modified to accommodate changes in building materials and better seismic design.
- There are different design requirements for seismic zones in New Zealand and for various categories of building use.
- The Building Act expresses the Government's objective that all old buildings (pre current code) are upgraded so they have strength in excess of 33% of the current seismic loading standard as a minimum. This standard may change following the Christchurch earthquakes but early indications from the Earthquake Commission are that this is unlikely and the Government will continue to let local communities decide what is appropriate for their situation.

Wanganui's Earthquake-Prone Buildings (EQPB) Policy

Wanganui District Council adopted its initial earthquake-prone buildings policy in June 2006 and adopted a revised version in 2009 during the 10-Year Plan review. The policy attempts to identify 'potential' EQPBs in the district, give timeframes for their 'initial evaluation of performance' and compliance with 33% Building Code upgrade requirement. It also outlines how the information is managed and how Council will treat heritage buildings through its policy requirements.

The policy is available on the Policies page of the Council's website www.wanganui.govt.nz.

How does Wanganui's built environment stack up to a risk of earthquake?

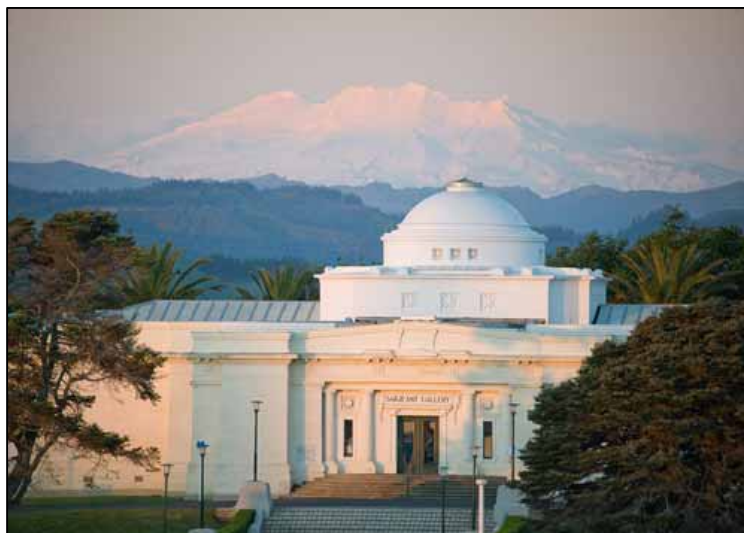
- Wanganui has a large number of old unreinforced masonry buildings.
- There are a large number of buildings in the old town area in the 70-100 year bracket; a high proportion nationally with high heritage significance.
- There are not many high rise buildings.
- Wanganui has pockets of high, medium and low liquefaction areas, predominantly around the low lying river flat areas.

What happens if my building is identified as potentially earthquake-prone?

The Council's policy sets out the following timeframes for initial assessments of potentially earthquake-prone buildings and completion of compliance work.

Timeframe for building owners to have an *initial evaluation procedure (IEP)* undertaken on their building and submitted to Council:

- Category A – December 2010 - buildings with special post-disaster functions. (For example, the Council's Municipal Building in Guyton Street).
- Category B – December 2011 - buildings that contain people in crowds or contents of high value. (For example, the Sarjeant Gallery which houses a high value art collection).
- Category C – December 2012 - all other buildings not in Category A or B.



The Sarjeant Gallery is a Category B building.

Timeframe for *building compliance* with the Council's EQPB Policy:

- Category A – Started compliance work by 2020 and completed work by 2030.
- Category B – Started compliance work by 2020 and completed work by 2030.
- Category C – Started compliance work by 2030 and completed work by 2040.

Note that the EQPB Policy is under review.

What is an Initial Evaluation Procedure (IEP)?

IEP stands for Initial Evaluation Procedure which is a high level assessment of a building's potential strength in relation to New Building Strength. It provides an indication of whether a building requires a more detailed assessment to determine its actual strength, so decisions about whether to remain in or vacate a building should not be made on the basis of the IEP.

Who will do the IEP?

An IEP can be prepared for your building by any qualified structural engineer.

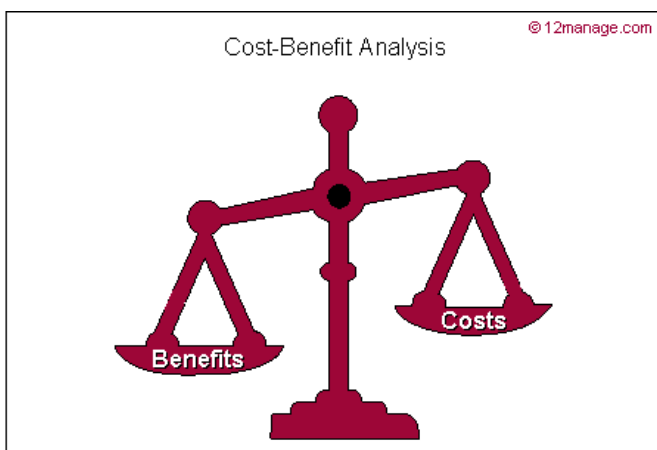
Who will pay if my building needs to be upgraded?

Building owners are responsible for all costs associated with upgrading their buildings. Any upgrade work will require building consent.

What are the issues for Wanganui's buildings?

- As a national comparison, Wanganui has a high proportion of EQPBs, many with high heritage values.
- The February 2011 earthquake in Christchurch was a 1 in 2000 year event. Our building code designs for a 1 in 500 year event. By and large, Christchurch buildings performed well in such a large seismic event.
- The costs to upgrade are a financial burden for our community.
- These prohibitive costs can result in decisions to demolish heritage buildings and start again.
- There are risks that every year we put off seismic upgrading we are closer to an event similar to Christchurch with similar consequences.
- Council owned buildings are often places of public assembly or house vital lifeline services.

How do we balance our decision making?



- This is a classic 'risk management' decision for both Council and private building owners.
- We have to weigh up the significant cost to seismically upgrade buildings vs the benefit to safeguard life, building profitability and key services.
- And we need to consider what value we place on heritage buildings in Wanganui.

Where can I get more information?

If you would like further information or to discuss your building, please contact Wanganui District Council's Building Services Team on 349 0001 or call in to see us at 101 Guyton Street.

The EQPB Policy is on the Policies page of our website www.wanganui.govt.nz.

We also encourage building owners and occupiers to talk to each other about their particular building and how the strengthening requirements may affect them.