Is Galbraith the only building with earthquake problems?

Buildings like hospitals are held to a higher standard than commercial or accommodation buildings because of their expected use following a disaster.

CM Health has a responsibility to ensure all earthquake risks relating to its buildings are actively identified and managed. Given the age of many of CM Health's buildings (average age at Middlemore Hospital is 40 years) it is possible there are other buildings with earthquake (and other) issues.

The Auckland Council estimates there are about 1800 earthquake prone buildings (EPBs) in Auckland.

CM Health's Facilities Master Plan has prioritised investments to address the highest health service demand pressures (the Immediate Demand programme) and to fix key buildings and related infrastructure problems (the Facilities Remediation programme).

Decisions on future use of the Galbraith building (two buildings – north and south) and how much we might spend in fixing it has an important impact on other facility developments.

What happens now?

CM Health is now required to provide Auckland Council with the finalised seismic report. CM Health will then:

- be issued with a statutory Earthquake-Prone Building (EPB) notice, which must be displayed in a prominent place in the building
- have the details of the building added to a new national register of earthquake-prone buildings
- have 35 years from the date of the EPB notice to strengthen the building so that it is no longer earthquake-prone, or if a substantial alteration or change of use is carried out, have to strengthen the building at the same time

Decisions around current and future use of the Galbraith building will take all types of risks and requirements into consideration.

Are there any other issues with the Galbraith building?

Issues of concern with Galbraith building include, but are not limited to, earthquake rating, the location of critical pipes and supporting infrastructure which supports the wider Middlemore campus, asbestos and major maintenance needs of this 55 year old building.

Many public buildings, including schools and hospitals, built between the 1940s and 1980s have been built using products containing asbestos.
It should be noted that intact and undisturbed asbestos material generally does not pose a health risk.

A program of asbestos remediation is underway including asbestos removal and repair work, air monitoring and control.

Asbestos removal work is carried out by specialist contractors using strict safety procedures and specialist equipment.

None of the locations being monitored to date have exceeded the minimum level 0.01 fibres/ml (trace level).

COUNTIES MANUKAU HEALTH

Galbraith Building

Q&A's

What you **need to know**

What is the earthquake rating of the Galbraith Building and how do we know it's correct?

In 2017 CM Health commissioned a Detailed Seismic Assessment of the Galbraith building by independent engineering experts (Holmes Consulting).

The report provided an earthquake rating of the Galbraith building against the New Building Standards (%NBS) and the Importance Level (IL), based on how the building is used.

This rating system is a combined risk of earthquake hazards of the surrounding area and building vulnerabilities. This means:

- A comparison between an existing and new building with the same use on the same site that factors in the use of the building (e.g. health services, staff offices, other functions like plant rooms), and
- the risk or importance of that use

Based on these criteria, the Galbraith building was assessed as 20% of NBS for IL4 use. A building with a %NBS rating less than 34% is deemed to be **'earthquake prone'.**

Due to the importance of this rating on how we invest in current and future facilities, CM Health requested a peer review of the Holmes Consulting report by another company called Beca. This second review confirms that the Galbraith building is **earthquake prone.**

What does 'earthquake prone' actually mean?

Put simply, earthquake-prone buildings are those likely to collapse causing injury or death, or damage to any other property, during or following a moderate earthquake.

How likely is Auckland to have an earthquake?

No one is able to accurately predict when an earthquake will occur, or how strong it will be.

What we can say is that New Zealand is divided into three indicative earthquake zones. High risk areas include Christchurch, Wellington, Napier; moderate risk areas include New Plymouth, Hamilton and **low risk** areas include Dunedin, Whangarei and **Auckland.**

The likelihood of a large earthquake in Counties Manukau is very low compared to many other parts of the country.

Is it safe to occupy the Galbraith building?

CM Health takes the safety of staff, patients and visitors very seriously.

The Ministry of Building, Innovation and Employment (MBIE) suggests a pragmatic approach:

"Owning an earthquake-prone building doesn't necessarily mean your building should not be occupied. But it does mean you should get a professional engineering assessment as soon as you can, then work out a plan to fix any identified problems over a reasonable time period."

What is CM Health doing to fix this problem?

Because Auckland's earthquake risk is **low,** Auckland Council requires building owners to strengthen an earthquake prone building within 35 years of assessment.

CM Health is taking a responsible approach by assessing the Galbraith building ahead of Auckland Council requirements. We are acting much faster than required.

The decision to strengthen/alter the Galbraith building will consider future needs for a growing and aging population as well as the earthquake rating of the building.

What are the standards that buildings have to meet?

On 1 July 2017, the Building (Earthquake-prone Buildings) Amendment Act 2016 introduced changes to the way earthquake–prone buildings (EPBs) are managed, with the introduction of a national system for managing EPBs.

In 2017 CM Health commissioned a Detailed Seismic Assessment of the Galbraith building by seismic engineering experts, Holmes Consulting. (This is significantly in advance of the Building (Earthquake-prone Buildings) Amendment Act 2016 which for Auckland (low earthquake risk) area, means Auckland Council requires earthquake prone building assessments to be undertaken within 15 years.)

The report has provided an earthquake rating of the Galbraith building against the New Building Standards (%NBS) and the Importance Level (IL) of buildings.

This rating system is a combined risk of earthquake hazard and building vulnerabilities i.e.
- A comparison between an existing and new building with the same use, on the same site, that factors in the use of the building (services, other functions like plant rooms), and
- the risk or importance of that use

The minimum structural performance expectations of new buildings designed in New Zealand are set by five categories of importance levels (IL) which recognise different building functions and value to the community and consequences to life safety should they fail. For example an IL1 building could be a small shed whereas an IL5 could be a dam. The Galbraith building is currently assessed as an IL4 structure as it houses special post-disaster functions, i.e. maternity, radiology, plant room supporting other Middlemore buildings.

Based on these criteria, the Galbraith building has been assessed as 20% of NBS for IL4 use. A building with a %NBS rating less than 34% is deemed to be **'earthquake prone'.**