

Deciding if a building is earthquake prone

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Territorial authorities determine whether or not a building or part is earthquake prone. They normally make this decision after the building has been identified as potentially earthquake prone and assessed by an engineer.

Territorial authorities use information contained in engineering assessments, property files, and any additional information supplied by building owners to determine if a building or part is earthquake prone.

They should have a process in place to check that engineering assessments of potentially earthquake-prone buildings meet the criteria in the EPB methodology before accepting and using the engineering assessment to determine whether the building is earthquake prone.

The methodology to identify earthquake-prone buildings (<https://www.building.govt.nz/b1-structure/methodology-identify-earthquake-prone-buildings/>) sets out the criteria for accepting an engineering assessment, for recognising a previous assessment, and the basis for determining if a building or part meets the tests for being earthquake prone.

Information sheet: Deciding if a building is earthquake prone

[PDF 244 KB]

(<https://www.building.govt.nz/assets/Uploads/managing-buildings/earthquake-prone-buildings/deciding-if-building-earthquake-prone.pdf>)

Determining if a building is earthquake prone

There are two tests that territorial authorities apply to determine if a building is earthquake prone. The first test is about the strength of the building compared to a new one if it were to be built in the same location. The second test is about the consequence, if the building were to collapse, and the risk to people or other property.

An earthquake-prone building, or part of a building that is earthquake prone, is one that will have its ultimate capacity exceeded in a moderate earthquake, and if it were to collapse, would do so in a way that is likely to cause injury or death to persons in or near the building or on any other property, or damage to any other property.

The methodology to identify earthquake-prone buildings (<https://www.building.govt.nz/b1-structure/methodology-identify-earthquake-prone-buildings/>) sets out how to apply these tests.

The terms 'moderate earthquake' and 'ultimate capacity' are defined in the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005.

Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005 (<http://www.legislation.govt.nz/regulation/public/2005/0032/latest/DLM313966.html>) is available on the Legislation website.

Disclosure of earthquake prone status

Earthquake ratings, EPB notices and the EPB register disclose information about the building to the public so that building users can make their own risk assessment.

If a territorial authority determines that a building is earthquake prone, it needs to:

<http://mbie5.cwp.govt.nz/managing-buildings/managing-earthquake-prone-buildings/how-the-system-works/deciding-building-earthquake-prone/>

- assign an earthquake rating for that building,
- issue an EPB notice to the owner to display prominently on the building, and
- publish the building information on the EPB register.

Assigning an earthquake rating helps people to understand and identify the lowest rated buildings and their expected seismic performance. Earthquake ratings mean the degree to which the building, or part, meets the seismic performance requirements of the Building Code that relate to how a building is likely to perform in an earthquake, and that would be used to design a new building on the same site as at 1 July 2017 – the date the new system came into force.

For example, if a territorial authority determines that a building meets 25% of the requirements of the building code described above (ie equivalent to 25% of the New Building Standard or NBS), the earthquake rating of the building would be 25%.

There are two categories of ratings for earthquake-prone buildings prescribed in regulations. These categories determine which form of EPB notice is issued:

- 0% to less than 20%
- 20% to less than 34%

Earthquake ratings are disclosed to the public on EPB notices. Owners must display EPB notices on the earthquake-prone building in a prominent place. EPB notices also contain the deadline for owners to take action, by either strengthening or demolishing the building.

The territorial authority must also update the public EPB register to make sure that the public can access up-to-date information on which buildings have been identified as earthquake prone and also see their earthquake rating.

[The methodology to identify earthquake-prone buildings \(https://www.building.govt.nz/b1-structure/methodology-identify-earthquake-prone-buildings/\)](https://www.building.govt.nz/b1-structure/methodology-identify-earthquake-prone-buildings/) sets out how to assign earthquake ratings.

[Territorial authorities and earthquake-prone buildings \(https://www.building.govt.nz/managing-buildings/managing-earthquake-prone-buildings/what-earthquake-prone-buildings-system-means-for-you/territorial-authorities-earthquake-prone-buildings/\)](https://www.building.govt.nz/managing-buildings/managing-earthquake-prone-buildings/what-earthquake-prone-buildings-system-means-for-you/territorial-authorities-earthquake-prone-buildings/) has more information on the responsibilities of territorial authorities.

Online learning: Deciding if a building is earthquake prone

Learn more by taking the online course on making decisions about earthquake-prone buildings.

Go to the online learning site (<https://learning.building.govt.nz/course/index.php?categoryid=9>)

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