

# BUILDING PERFORMANCE

## Earthquake-prone buildings: strategic engineering advice to assist territorial authorities

Territorial authorities (TAs, e.g. local councils) identify potentially earthquake-prone buildings and determine whether or not a building, or part of a building, is earthquake prone. The Building Act 2004 specifically states this is the responsibility of the TA.

TAs may find it useful to engage an engineer or engineers to provide strategic engineering advice at key points in the process for particular cases e.g. strategic engineering advice on:

- identifying potentially earthquake-prone buildings;
- accepting engineering assessments and previous assessments; and
- determining whether or not the building is earthquake prone.

This advice from the engineer should not involve specific or detailed engineering inputs on individual buildings – that is, the engineer should not be providing or undertaking seismic assessments or detailed technical reviews of seismic assessments.

It is recommended that TAs obtain strategic advice from experienced engineers who have:

- a good understanding of the new system for managing earthquake-prone buildings; and
- knowledge about the local area.

The table below gives examples of engineering inputs that may assist TAs to identify and make decisions on potentially earthquake-prone buildings.

Process step	Nature of engineering input
<b>Identify</b> Identify using profile categories	Review of uncertain cases where the profile category is difficult to ascertain (should be selected complex cases, not all cases about whether buildings are within profile categories or not), which: <ul style="list-style-type: none"> <li>• may require verification by the engineer of particular details (e.g. the type of construction/materials);</li> <li>• should not require the engineer advising the TA to carry out a seismic assessment.</li> </ul>
<b>Identify</b> Identify at any time	Review of cases where it is unclear whether there is ‘a reason to suspect’ the building may be earthquake-prone, which: <ul style="list-style-type: none"> <li>• could include verification by the engineer of whether reason to suspect one or more of the reasons in the EPB methodology are met (refer to section 1.3 of the EPB methodology);</li> <li>• should not require the engineer advising the TA to carry out a seismic assessment.</li> </ul>
<b>Decide</b> Accept an engineering assessment	Consideration of engineering assessments in uncertain cases, which: <ul style="list-style-type: none"> <li>• could include assisting the TA officer identifying whether the technical requirements for the assessment and the reporting requirements for the assessment have been met;</li> <li>• should not require the engineer advising the TA to carry out a peer review.</li> </ul>

<p><b>Decide</b> Accept a previous assessment</p>	<p>Consideration of previous assessments in uncertain cases, which:</p> <ul style="list-style-type: none"> <li>• could include assisting the TA officer identifying whether the technical requirements for the assessment from the EPB methodology and the reporting requirements for the assessment have been met;</li> <li>• should not require the engineer advising the TA to carry out a peer review.</li> </ul>
<p><b>Decide</b> Determine if a building is earthquake-prone</p>	<p>Review of cases where it is unclear whether the 133AB(1)(b) test is met, which could include assisting the TA officer analysing the information with respect to the exposure of people or adjacent property, or assisting with the interpretation of engineering modes of failure statements.</p>

TAs may also wish to obtain strategic engineering advice to:

- corroborate the approach to identifying potentially earthquake-prone buildings using profiling and at any time pathways;
- identify any notable local technical issues eg previous strengthening practices;
- assist with identifying priority buildings by providing advice on the predominant locations of unreinforced masonry facades.

**More about the Identify and Decide processes can be found in the following information sheets:**

<b>Identify</b>	TAs identify potentially earthquake-prone buildings
<b>Decide</b>	TAs determine whether buildings are earthquake prone and assign ratings

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