



**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI



Proposals for a methodology to identify earthquake-prone buildings

FORM FOR SUBMISSION

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This form sets out the consultation questions corresponding to each proposal in *Proposals for a methodology to identify earthquake-prone buildings* (the EPB methodology discussion document), in a format for your response.

Instructions for use

Please refer to section 1 of the EPB methodology discussion document for details of how to make your submission.

These questions are indicative only and are not intended to limit your response.

You do not have to use this form to make your submission.

If you do choose to use this form to make your submission and complete this form electronically, the response boxes will expand accordingly as you type your response.

You may also print this form and handwrite your response. If you intend to do this, you may expand the response boxes before printing if required, or continue your submission on an attached piece of paper if you run out of space. If you need to do this, please label your response and the question to which it corresponds clearly.

You can:

- email your completed submission to EPBconsultation@mbie.govt.nz, or
- post your completed submission to:
Ministry of Business, Innovation and Employment
15 Stout Street
PO Box 1473
Wellington 6140
Attention: Earthquake-prone buildings consultation

Please provide your contact details below with your submission.

Name	Contact details (email or physical address)
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Identification of potentially earthquake-prone buildings via profile categories

Proposal at a glance	What this does	Why
<p>Identification of potentially earthquake-prone buildings via profile categories (section 3.2)</p>	<p>Establishes the profile categories (by seismic area and then by building characteristics) for the buildings that TAs must classify as potentially earthquake prone</p>	<p>TAs must identify potentially earthquake-prone buildings in their region within the time frames defined in the Amendment Act</p>

1. Do you agree with the proposal to specify types of buildings that are potentially earthquake prone based on readily identifiable characteristics? If not, how should potentially earthquake-prone buildings be identified in the methodology?

The concept seems extremely over-simplistic. Much depends on how much effort a TA will be expected to go to before determining a building is EQ prone. If it is based on the category alone, without even referring to TA records regarding the building (drawings, past building consents etc.), then there is the potential for a significant number of buildings being declared potentially EQ prone that are not, with the onus and costs of proving otherwise falling on owners.

Emphasis is placed on the experiences of the WCC, however, the WCC conducted an IEP style investigation on each building at ratepayers' cost, before informing an owner of the potential EPB status.

In categories where 80% or more buildings are likely to be EQ prone, this shift in costs from TAs to owners is arguably not that significant, however, we note that the WCC is recommending introducing additional categories on the basis that they found 10-15% of buildings within these categories were EQ prone. This means that 85-90% of owners will face costs of around \$2000 plus gst for no reason. This may seem a small amount, however for small a residential Body Corporate it is actually quite significant for owners who are, for example, on a benefit.

The BCCG would also question that the costs of contesting the TA's assessment would be as low as \$2,000. Our discussions with seismic engineers puts the cost at considerably higher, especially if there is a sudden shortage of qualified seismic engineers as a result of a TA doing a very large desk assessment of the buildings in their area, and marked many as EQP perhaps simply because of their age and construction type.

We recommend that TAs must be required to establish "reasonable grounds" for declaring a building potentially EQ prone, rather than a simplistic application of the profile categories. The methodology does mention "acceptable evidence" but there needs to be more detail as to what a TA should consider. This acceptable evidence also needs to be required, rather than something a TA "should" do, and more stringently described as "reasonable grounds".

In addition, although the methodology requires the TA to inform the owner of the basis for identifying the building as EQ prone, this is only "which profile category the building corresponds". We believe the TA must be required to provide additional information i.e. to provide the evidence that they have "reasonable grounds".

2. Do you agree with the use of building age or era of construction, construction type, and number of storeys or height being the parameters used? If not, what parameters should be used?

We note the WCC's comment that ground conditions should be included, and this would seem reasonable in the light of the experiences from all the severe NZ earthquakes experienced since 2010, but "ground conditions" would need to be clearly defined.

Has the failure of non-structural elements in the 2013 and 2016 quakes in newer buildings, together with reference to parts of buildings in the definition of an EQ prone building, been considered? The public has expressed significant concern about the failure of elements such as false ceilings. The BCCG would prefer non-structural elements not to be incorporated into the parameters as this will widen the net too far, and without a better understanding as to why these elements have failed in the recent quakes, this could result in unnecessary additional costs incurred by owners and TAs during the assessment process.

3. What, if any, profile categories of buildings should be included that are not?

We are concerned at the suggestion by the WCC to include additional categories where only a small percentage of buildings have been found to be EQ prone, unless TAs/ratepayers fund the cost of the initial assessment, which is a reasonable suggestion given that this is a public safety matter.

4. What, if any, profile categories of buildings shouldn't be included that are?

5. Are the profile categories adequately defined to allow TAs to identify potentially earthquake-prone buildings? If not, what other information is needed?

6. Is the information required by a TA to identify a building as potentially earthquake prone adequate?

*The profile categories themselves may be an adequate starting point, but once again, we believe that the methodology should stipulate what else a TA **must** consider beyond the profile category in order to establish reasonable grounds and provide acceptable evidence.*

The BCCG acknowledges that some buildings will be missed by this process and concurs with the WCC view that the effectiveness of the approach must be reviewed in the future. This review will need to be informed by meaningful metrics, implying good data collection. TAs may need guidance, or even mandated processes, to achieve this.

7. Do you have any comments on how this proposal will work in practice and its impact? What are the pros and/or cons?

The BCCG has concerns that the use of profile categories has the potential to shift most of the costs of identification of potentially EQ prone buildings from the TA (all ratepayers) to building owners. BCs are currently facing increased costs with Health and Safety Act requirements and increases in insurance costs (indications are that these may double in Wellington post the 2016 quake), and even the apparently minimal costs of the ISA will be beyond some BCs to finance easily. It is simple to suggest that owners of a unit in a BC should sell if they can't afford the BC levies, but between negative equity and buyers unwilling to take on high levies that could escalate when faced with strengthening, this is not so easily done.

8. Do you have any other comments on these proposals?

Identification of potentially earthquake-prone buildings at any time

Proposal at a glance	What this does	Why
Identification of potentially earthquake-prone buildings at any time (section 3.3)	Establishes how TAs may identify a building as potentially earthquake prone in other circumstances	Clarifies when a building outside the profile categories could be identified as potentially earthquake prone and require assessment

9. Do you agree with the TA's powers to identify a potentially earthquake-prone building at any time, being applied by drawing upon either existing knowledge or information received, or through activities such as the building consent process? If not, why not?

The BCCG recognises that there must be a means to identify a building as potentially EQ prone other than by a determination based on profile category, however, there are some concerns.

There is the potential for this process to be open to abuse by disgruntled tenants or individual owners within a Body Corporate. Unless the "information received" is in the form of an assessment report that meets the criteria for acceptance, the TA must be required to validate the veracity of the information before identifying a building as potentially EQ prone and notifying the building owner. Regardless as to the source and quality of the information received, this process must include discussions with the building owner. The methodology must address these points.

*The ability to identify potentially EQ prone buildings based on "new information relating to construction types not covered by the categories" would allow any new technologies or new knowledge about buildings or earthquakes to be retrospectively applied to **all buildings**. This could result in a recently strengthened building being designated "potentially" earthquake prone again. This will generate uncertainty for building owners, something that the Act was intending to avoid (by the use of the phrase "commencement date" in the definition of a moderate earthquake). There needs to be greater clarity that such retrospective "broad brush" identification across all buildings is not the intention under this provision and that TAs will not be able to do so, especially for buildings already strengthened.*

10. Do you have any comments on how this proposal will work in practice and its impact? What are the pros and/or cons?

A per question 9.

11. Do you have any other comments on these proposals?

The TA must have more than just a “reason to suspect”. They must have reasonable grounds before declaring a building to be potentially earthquake prone and requiring a building owner to provide an assessment. It is important to avoid owners incurring unnecessary costs, stigma and anxiety arising from a TA responding to ill-informed public fears.

Post-quake assessments: the recent situation in Wellington resulted in confusion and anxiety for residents of buildings that had already been adequately assessed. While the BCCG recognises that there may be a small number of uncooperative owners, most wish to do what is required of them, but there is currently no clear process for handling post-quake assessments. Indeed, there is no stated basis for any assessment to be done. In many buildings it is the tenants who clamour for greater assurance rather than the owners, especially when the owners may not live or work in the building.

Once an assessment is done, the owner is not required to supply a copy of the assessment to the TA, nor would they know who to submit it to if they wanted to. Worse, the TAs currently have no means to contact building owners or Bodies Corporate, only rate payers.

It is important that the methodology prevents individual TAs “inventing” their own strategies and criteria for this provision. In all instances, the overriding basis for the TAs role should be to help owners to strengthen their buildings in a timely and cost-effective manner and to avoid anything that could obstruct this, such as undermining the certainty that strengthening solutions already implemented at significant cost will be declared ineffective at a future date.

Description of parts of buildings

Proposal at a glance	What this does	Why
Description of parts of buildings (section 4.2)	Describes the scope of parts of buildings that engineers are required to consider when carrying out engineering assessments	Clarifies what ‘parts of buildings’ means

12. Do you agree with how parts of buildings are described? If not, how do you think parts of buildings should be described?

We have identified two problems with the definition:

- 1. The reference to “significant life safety hazard” conflicts with the use of the word “injury” in the definition of an EQ prone building. If use of the word “injury” was intended to be wider than just life-threatening injuries then the definition of parts of buildings can’t be constrained to significant life safety hazards. The BCCG view is that, in the interests of avoiding unreasonable strengthening cost escalations, the definition of EQ prone buildings should indeed only consider serious or life threatening injuries.*
- 2. “A number of people” is open to interpretation and implies that the hazard has to affect more than one person. This again seems to contradict the Act.*

13. Do you think further examples are needed of parts that may have the potential to create a significant life safety hazard?

Further examples are essential, particularly due to the issues with Wellington building interiors in the 2013 and 2016 quakes. The current examples include heavy walls and heavy equipment, but if electrical and plumbing elements both fail, then electrocution would become a significant life safety hazard. So should these be included or excluded from “parts of buildings”? More examples will provide greater clarity and increased consistency nationwide.

If injuries have to be considered rather than just significant life safety hazards (see response to Q12), then the scope of the “parts of buildings” definition is much wider.

So providing examples of what is and isn’t a part of a building will also help clarify what is meant by an injury or life safety hazard.

14. Do you think examples should be provided of parts that would be unlikely to have the potential to create a significant life safety hazard?

See response to Q13.

15. Do you have any comments on how this proposal will work in practice and its impact? What are the pros and/or cons?

The methodology needs to provide clearer criteria and guidelines to help engineers understand which building elements need to be considered, especially over and above structural elements.

16. Do you have any other comments on these proposals?

Type of engineering assessment required

Proposal at a glance	What this does	Why
Type of engineering assessment required (section 4.3)	Sets out the acceptable types of engineering assessments and the engineer's role in determining whether to undertake an Initial Seismic Assessment (ISA) or Detailed Seismic Assessment (DSA) for a building	Helps to make sure the appropriate type of engineering assessment is carried out to provide sufficient information to determine whether or not a building is earthquake prone

17. Do you agree with incorporating the Engineering Assessment Guidelines by reference for the types of assessment required?

Although the BCCG acknowledges it is not qualified to judge the content of the Engineering Assessment Guidelines, we agree in principle that the Engineering Assessment Guidelines should be referred to, as they will form a key element in achieving consistent processes for assessing a building and for the format/content of the resulting report.

18. Are there other assessment methods that you think should be recognised? If so, what are they?

19. Do you have any comments on how this proposal will work in practice and its impact? What are the pros and/or cons?

The BCCG welcomes the provision of the ISA mechanism to allow an assessment to be obtained at a cost far less than the DSA. However, there should be a provision for a building owner to elect to go straight to a DSA if it is clear from an initial conversation with an engineer that the building is highly likely to be earthquake prone. This will reduce the overall cost of the assessment process. The flowchart should reflect this.

*When determining whether or not a DSA is required in addition to an ISA, steps need to be taken to ensure that engineers do not rot the system. Engineers may choose to insist on DSAs in order to generate revenue. The owner should be able to seek the TA's view **at no cost** as to whether or not a DSA is required.*

20. Do you have any other comments on these proposals?

The BCCG agrees with the WCC response: owners do need to be given good upfront advice on how to go about getting an assessment, with guidelines and cost indications. We suggest that a complete information pack be given to owners at the time they receive the notification that their building is potentially EQ prone. We believe that MBIE should take responsibility for creating this information pack, again to help ensure nationwide consistency and in recognition that not all TAs will be proactive.

We fear that MBIE, MPs and others are under-estimating the true costs of these assessments. Engineers have told us that a DSA for a larger building would cost \$20,000 to \$80,000 plus gst and \$6,000 - \$10,000 plus gst for a small building depending on the technique used (note: most BCs are not gst registered). Indicative costs for ISAs have been hard to obtain as the engineers don't seem to have grasped what an ISA requires vs. the old IEP, but some agree that an ISA will start at the high end of the \$800 - \$2,000 plus gst cost of an IEP, and another has said they would be hard pressed to complete an ISA for under \$5000.

Criteria for accepting engineering assessments

Proposal at a glance	What this does	Why
<p>Criteria for accepting engineering assessments (section 4.4)</p>	<p>Establishes criteria for TAs to accept assessments and what else is required (eg qualifications of the assessor, inspections etc)</p>	<p>Helps TAs to make sure that engineering assessments are of suitable quality and contain sufficient information for them to assist with determining whether or not a building is earthquake prone</p>

21. Are the acceptance criteria adequate?

The criteria seem reasonable, except that the need for evidence of a site inspection should be clarified: the proposal states that evidence of a site inspection is required for both an ISA and DSA, but there is no indication as to how detailed this site inspection needs to be. For example, should the interior of every apartment in an apartment building be inspected or is a sample adequate? This should be clarified, especially for an ISA as it has a direct impact on the assessment cost (the old IEPs often relied on a “drive by”). The inspection requirements for an ISA must not insist on expensive or invasive test methods, which are best reserved for the DSA.

22. What, if any, acceptance criteria, should be included that aren't?

23. What, if any, acceptance criteria, shouldn't be included that are?

24. Do you have any comments on how this proposal will work in practice and its impact? What are the pros and/or cons?

*We have heard of occasions where the TA has disagreed with an engineering assessment. We would like clarification within the methodology that the TA **must** accept an assessment, provided it meets the criteria. This includes the ISA: if an engineer is entirely confident that the ISA is adequate and no DSA is needed, the TA must not be able to force the owner to get a DSA.*

We would also like to see MBIE provide guidance as to what engineers, TAs and owners should do if there is disagreement regarding an assessment outcome or between two different assessments, especially if both assessment reports meet the criteria. Although the determination process could be used to resolve such disagreements, this should really be a last resort.

25. Do you have any other comments on these proposals?

The BCCG is aware of a number of instances where engineering assessments have produced wide variations in resulting % NBS. We therefore welcome any initiative that aims to reduce this and MBIE must do all it can to ensure that the new Engineering Assessment Guidelines can achieve this.

The proposal states that Engineers may be asked to provide a Peer Review. The BCCG is concerned, especially in light of the WCC's submission response, that owners will incur additional costs. MBIE has indicated to the BCCG that their intent is that owners would not be subject to TA imposed costs of this nature. The methodology should therefore:

- a) specify the grounds on which the TA may request a peer review*
- b) state that the TA should have to inform the owner and engineer why a peer review is required, in the same way they have to specify why a report does not meet the criteria*
- c) state that the peer review needs to be at the TA's cost*

MBIE needs to ensure that engineers are trained in the methodology. Training is already taking place for the technical aspects of the Engineering Assessment Guidelines, but it is clear from comments made by engineers to the BCCG, some are unaware of the procedural requirements of the methodology (such as the provisions for an ISA and the criteria for an acceptable ISA). Once again, information should also be made available to building owners as part of an information pack. This should include what an owner needs to ask an engineer in order to establish that the engineer's credentials meet the criteria stipulated and that the engineer is fully up to speed with the new Act, Regulations and Methodology.

Determining if a building is earthquake prone

Proposal at a glance	What this does	Why
Determining if a building is earthquake prone (section 4.5)	Sets out the basis for TAs to determine whether a building is earthquake prone under section 133AB of the Amendment Act	Helps TAs to fulfil their requirements under section 133AK of the Amendment Act to determine whether a building is earthquake prone by clarifying what is required for a building to meet this legal test

26. Do you agree with the description of how the section 133AB(1)(a) test will be applied? If not, why not?

Yes, given that the 34% figure is no longer open for debate.

Note that the BCCG position is that any cost:benefit analysis on the current 34%NBS threshold shows that there is significantly greater cost than any benefit. Even Minister Smith has indicated that the risk of being killed by an EQ is considerably less than being killed in a car crash or a plane accident. Government seem willing to charge back massive costs of strengthening to individual owners where there is seen to be little real benefit.

27. Do you agree with the description of how the section 133AB(1)(b) test will be applied? If not, why not?

There is a lot of terminology in the description that seems to require subjective interpretation, including the term "injury" given the indication under Parts of Buildings that this may be limited to "life safety" in some cases. So there needs to be more definition for the following terms, perhaps in a manner similar to the exemption thresholds, or by examples:

frequent/infrequent

occupancy, including "foreseeable"

injury (this is a wider issue, given it is used in the Act)

close proximity

We also note the WCC reference to the word "persons" – should this be one or more?

28. Do you have any comments on how this proposal will work in practice and its impact? What are the pros and/or cons?

The proposal document says "If TAs are unable to make a decision using the information provided in the engineering assessment, they may commission engineering advice.". We would like the methodology to clarify that in these circumstances, the TA must incur the costs involved, not the owner, especially when the assessment meets the acceptance criteria.

29. Do you have any other comments on these proposals?

Assigning earthquake ratings

Proposal at a glance	What this does	Why
Assigning earthquake ratings (section 4.3)	States that the earthquake rating of an earthquake prone building will be assigned based on the %NBS outcome specified in the engineering assessment	Makes it clear how TAs assign these ratings

30. Do you agree with basing the rating on the %NBS outcome specified by the engineer in the engineering assessment report for those buildings confirmed as earthquake prone? If not, what method should be used?

The proposal states “assigned based on the %NBS outcome specified by the engineer in the engineering assessment report”. The BCCG welcomes the clarification that it is the engineer’s assessment and not the TA that determines the outcome, and stresses the importance that a TA must not be able to override the engineer’s result (without a further assessment of their own, which must not be at the owner’s cost).

31. Do you have any comments on how this proposal will work in practice and its impact? What are the pros and/or cons?

32. Do you have any other comments on this proposal?

We refer to our submission commenting on the Regulations: we disagree with the need for two rating categories for EQBs.

Criteria for recognising previous assessments

Proposal at a glance	What this does	Why
Criteria for recognising previous assessments (section 5.2)	Establishes criteria for TAs to recognise and accept previous assessments (ie any carried out that have not led to an earthquake-prone building notice under the current Act)	Spells out when assessments carried out before the commencement date of the Amendment Act can be recognised

33. Do you agree with the criteria specified for the recognition of previous assessments? If not, why not?

The BCCG welcomes the provision to recognise assessments performed prior to the commencement date, however, we would like clarification regarding the need for evidence of a site inspection. Given that this has not been required in the past, especially for an IEP (where engineers have often used a “drive by” approach), we recommend that either this criterion be removed or is changed so that it is allowable for the assessment report to be accompanied by a separate inspection report.

We also refer to our previous response to Q21 that the extent of the inspection should be clarified.

In relation to the WCC response, we agree that geotechnical assessment criteria should be included, but only applicable to new assessments after the commencement date and not in the consideration of previous assessments.

34. What, if any, criteria, should be included that aren't?

35. What, if any, criteria, shouldn't be included that are?

36. Do you have any comments on how this proposal will work in practice and its impact? What are the pros and/or cons?

37. Do you have any other comments on these proposals?

If a TA does not accept a previous report, they must be required to inform the owner and engineer in writing with sufficient detail as to what criteria were not met and why they were not met. The TA must also be required to provide the owner with a right of response.

Note that if a previous report has already been accepted by the TA, we do not believe it would be acceptable for the TA to then later reject the assessment.