

## Submission from the Inner City Association (Wellington) on the Proposals for a methodology to identify earthquake-prone buildings

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ICA was incorporated as the Wellington Inner City Residents and Business Association in November 2008, and referred to as Inner City Association or ICA. ICA represents residents and businesses in Wellington's inner city.

Many of our members are directly affected by the provisions of the Amendment Act and these regulations. They either own property in a building that has been issued with a s124 notice (strengthen or demolish) under the Building Act 2004 or their property falls under the definition of an EQP building and could be affected by any change to the definition of an EQP building (ie, ultimate capacity or moderate earthquake) via regulation in the future.



INNER  
CITY  
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Representing  
Wellington  
Inner City  
Residents and  
Businesses

### Identification of potentially earthquake-prone buildings via profile categories

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

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?

ICA agrees with the profile approach but has concerns about how it is being applied. While it is easier for the TA to identify the group of buildings that are most likely to be earthquake prone, it passes the full cost of confirming whether the building is even potentially earthquake prone to the owners to achieve public good outcomes. In Wellington, all ratepayers shared the costs through the Wellington City Council (WCC) completing the IEP for the buildings covered by the proposed profile categories. Owners then bore the cost of confirming whether the building was or was not earthquake prone.

Indicative costs for ISAs are in the region of \$800 - \$3000 excl GST, with one engineer indicating they would not complete an ISA (basically the IEP). This immediately increases costs for owners as a DSA is likely to cost anywhere between \$10, 000 - \$80,000 excl GST depending on the type of building (excluding any geotechnical assessment).

There has been no regulatory impact assessment of this approach. WCC assessed 4,700 buildings. If the proposed approach had been used the potential cost (at a conservative \$1500/ISA), would be over \$7m across the city. For many owners, they would then need to do a DSA. The regulatory impact analysis

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should be completed and made available before any decision is made, along with making available the additional data MBIE is collecting.

This approach could exacerbate the issue of constrained capacity of the engineering fraternity to complete the work. It increases the risk of inexperienced staff being used for this work. It could be more cost effective for TAs to contract/employ suitably qualified engineers to complete the ISA using the profile category approach as suggested.

ICA supports the previous practice used by WCC to identify potentially earthquake prone buildings.

ICA is concerned that WCC's recommendation to extend the profile categories will further increase costs for owners. The data provided for the inclusion of one and two storey buildings built 1935-1976 does not justify the inclusion of all buildings as a large number of owners (85 – 90%) will bear unnecessary costs. ICA does not consider that WCC's recommendation to add a category for 'location, ground condition and ground composition' is necessary. It would effectively expand the buildings that would be included without being specific about the categories of buildings, which is the intent of the profile approach. If there were concerns about particular buildings in certain locations then these can be addressed through the ability to identify potentially earthquake-prone buildings at any time.

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?

In principle, the parameters are a good starting point, but subject to further prescription about how much investigation the TA does prior to identifying a building as potentially earthquake prone.

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

ICA does not consider that ground, location or ground composition (for reasons described in Q1) or non-structural items should be added in to the categories. Including non-structural items would spread the net very wide and potentially will include every building, including very new ones. Further investigation is required to determine why non-structural elements in some buildings are failing before taking this step. The results of the investigation must be made public. Additional categories should only be added after investigation and public consultation.

See Q1 for ICA's comments on the additional categories proposed by WCC.

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

ICA is concerned about the implications of WCC's response to this question. It is unclear why the proposed approach would only identify 'the worst of the worst', when it appears to be a very broad brush requiring significant investment by owners in ISA/DSA using an agreed methodology to confirm whether or not the building is earthquake prone.

The emergency powers provided for the response to the 14 Nov earthquakes have the potential to provide TAs with wide powers. They were described in the media as a response to recalcitrant landlords not providing tenants with information, but in effect have much broader powers as shown by the identification of 80 buildings requiring further assessments. While there does need to be a practical relationship between the CDEM and Building Acts, this has to keep in mind the objective of public safety for the seismic legislation. WCC has long promoted the need to include economic resilience within the

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scope of retrospective seismic strengthening outcomes (as indicated in WCC's covering letter). The current approach of a one size fits all for commercial (business and public) buildings and wholly or predominantly residential buildings is already highlighting the challenges for the residential buildings. This will only increase if the scope is broadened without significant public funding assistance.

Information on the use of the emergency powers and the outcomes of further mandatory assessments must be made available to the public so everyone is aware of issues and actions taken. There must be a timeframe for when a summary of the outcomes of the assessments is made available to the public.

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

WCC's proposed category of ground, location or ground composition is not adequately defined (see Q1 response).

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

The information described in the discussion document (p21, plans, drawings or other Council held records or a visual inspection) is adequate, providing it includes all the plans/drawings etc held on the building. However, there is no specific requirement for a TA to review these documents and consider them in making the decision. This needs to be strengthened. S133AG(1)(b) says a TA only has to have 'reason to suspect' a building is potentially earthquake prone. This is inadequate; it should at least be 'reasonable grounds'.

The requirement of a visual inspection by TAs, at this point, should be mandatory rather than just 'good practice'. This would at least highlight if there was a potential issue with pounding from other buildings.

This approach enables a TA to identify all buildings fitting the profile as potentially earthquake prone to minimise its costs and pass the costs to owners to achieve public good outcomes. The regulations have to ensure that TAs have 'reasonable grounds' for identifying potentially earthquake prone buildings.

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

ICA agrees with WCC that the approach of using profiles is a good starting point, but we remain concerned that the bulk of costs are being passed to owners for public good outcomes. The process must be reviewed in 12-18 months. There must be a requirement for TAs to keep records of buildings they identify as potentially earthquake prone, the resulting outcome (was the building earthquake prone), whether other evidence was used, or specifically commissioned ISA or DSA, how many were completed during the 12 month period, how many extensions were required. Owners should have the opportunity to feed into that review. Collecting this data is the only way to inform future decisions on the methodology.

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
<b>Identification of potentially earthquake-prone buildings at any time</b> (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?

Yes, in principle – based on the purpose as described in the discussion document (p22) '*Purpose of this provision is to capture other potentially earthquake prone buildings that differ to those described by the profile categories, as the profile categories will not capture all earthquake-prone buildings as previously noted*' and the text in the 'Why' of the proposal

The proposal must be specific that this only applies to buildings outside the profile categories. . The 2<sup>nd</sup> and 3<sup>rd</sup> bullet points on p23 uses 'becomes aware of issues'. This could expand it to include anything. In discussions with WCC and MBIE it seems there is a view that this provision could be used to retrospectively apply any new knowledge about building performance, earthquakes, etc to all buildings.

The intent of the legislation is to provide certainty to owners who have completed the assessment and strengthening processes. The discussion document section (p13) on 'moderate earthquake' states

This the same as the current definition of a moderate earthquake except that it states that the building standards that apply to the assessment and remediation of a particular building are those in place at the date the Amendment Act commences (likely to be in early April 2017).

In other words, this makes it clear that the definition of 'moderate earthquake' does not change as building standards are changed over time.

The proposal as written gives too much scope for TAs to make their own rules which will lead to inconsistency and conflicts with the intent to give certainty to owners who have completed the process.

Some owners of buildings in the 34 – 67%NBS are proactively strengthening based on the knowledge at the time. If they are then assessed as being potentially earthquake-prone again, based on new knowledge, this removes any incentive to proactively strengthen buildings.

The methodology needs to prescribe the process under which the TA has to evaluate the information made available to it by a third party and consult with the building owner(s) before determining the building to be potentially earthquake prone or placing any such indication on the file. It needs to be explicit that the TA cannot pass any costs onto the owner that the TA incurred in obtaining engineering

or other advice to verify the new information.

**10. 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 avoids the need to establish profile categories for post-1976 buildings which may be difficult to do, while allowing for new knowledge to be used to identify potentially earthquake-prone buildings. However, this means there is less transparency for owners of post-1976 buildings. It is unclear whether the 5 buildings referred to in WCC's submission that are now earthquake prone were inside or outside of the proposed profile categories.

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

ICA agrees with WCC's comments around the practicality of the process and we hope that commonsense prevails. The guidance to TAs must focus on TAs supporting owners to strengthen their buildings in a timely and cost-effective manner and minimizing unnecessary bureaucracy.

The example given by WCC raises a question about whether a building identified as being earthquake-prone through the consent application process goes onto the register of earthquake prone buildings. Such an action could discourage owners from being proactive, encourage them to hide information to avoid this and is unnecessary given that the remedial work is underway with the lodged consent. If there had been an issue with the building that was creating public safety risks, then the TA is likely to be aware of it and it would be dealt with through this part of the methodology. Clarity is needed on how this type of scenario will be approached.

### Description of parts of buildings

Proposal at a glance	What this does	Why
<b>Description of parts of buildings</b> (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?**

ICA agrees with BCCG and WCC that this section requires further definition and clarity. We are concerned about the variable use of 'life safety hazard', 'injury and death' and 'injury' in the discussion document and the lack of definitions for injury and life safety hazard. Does life safety hazard only mean the risk of death or include risk of death arising from an injury sustained from the loss of gravity ... (as per p25)?

The inclusion of 'parts' in the Amendment Act should have been based on evidence that the existing provisions in the Building Act 2004 did not adequately encompass these parts of the building. The 2013 and 2016 earthquakes are likely to have confirmed which 'parts' are cause for concern. Therefore, the

parts intended to be covered should be known by MBIE and TAs.

Are ‘parts’ those components that are intended to be attached to the building for the life of the building or the life of the fitout? What are ‘heavy items of plant’ – ducting in ceiling cavity or a large commercial size photocopying machine?

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

A possible inclusion is decorative features (eg, gargoyles).

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?

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

It needs to be tightly defined to achieve the objectives without providing a broad net that includes other items (eg, large furniture or equipment). It is better to err on the side of fewer and add other ‘parts’ as these are identified, based on evidence that a substantial problem with the part exists.

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

ICA notes that one of the key principles for the scope of parts ‘no practical mitigation’ is not included in the description of the actual proposal. Are engineers required to consider the practical mitigation available and would that apply to all ‘parts’. Who decides what a ‘practical mitigation’ is? There is the potential for variable interpretation of what is a practical mitigation and would be difficult to describe them. This phrase should not be included in the regulations if it cannot be clearly defined and consistently applied.

### Type of engineering assessment required

Proposal at a glance	What this does	Why
<b>Type of engineering assessment required</b> (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?

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ICA agrees that this is appropriate. This avoids TAs establishing their own requirements.

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

ICA notes WCC's view that both geotechnical and structural engineers should be assessing buildings, but that geotechnical considerations are not included until the step of 'recognising previous assessments'.

ICA considers the proposed DSA methodology which encourages appropriate geotechnical assessments at Step 2 and 3 of that process should be sufficient rather than separating it out.

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

ICA agrees with BCCG that it must be clear that an ISA as a separate step by owners is not required if they opt to have a DSA completed. While MBIE considers that an ISA is the first step of a DSA (to develop the qualitative knowledge of the building before starting the analysis) it seems that not all engineers understand this. This could result in poor quality DSAs if the lack of qualitative understanding impacts on the integrity of the rest of the DSA. MBIE and the engineering fraternity peak bodies have to improve the understanding among their profession to avoid a continuation of the variability that has existed.

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

The vast majority of owners and bodies corporate will not have structural engineering or geotechnical engineering knowledge freely available. MBIE must provide sufficient information written for owners (as well as TAs) to enable them to make informed decisions through this process and to achieve national consistency across all TAs. TAs should be making sure that owners have this information when their building is identified as potentially earthquake-prone.

## Criteria for accepting engineering assessments

Proposal at a glance	What this does	Why
<b>Criteria for accepting engineering assessments</b> (section 4.4)	Establishes criteria for TAs to accept assessments and what else is required (eg qualifications of the assessor, inspections etc)	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

**21. Are the acceptance criteria adequate?**

ICA agrees that the acceptance criteria are adequate with the exception of the scope and type of interior and exterior inspection. This is unclear and must be clarified (eg, every apartment or a sample, how big a sample; visual inspection only or physical tests). The IEP form in Part B only provides checkboxes for a ‘visual inspection’ of the interior and exterior.

ICA considers that the minimum requirement for an ISA is a visual inspection and that this must be stated in the methodology. Other inspection methods can be utilised if appropriate, but cannot be required.

Inspections can be invasive and expensive and would more likely form part of a DSA. In some buildings, other tests could be carried out at minimal additional costs and impacts on the building, to reinforce the results of an ISA. This is where owners have to rely on their engineers to give them reliable advice.

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

Evidence of factual error (s133AI(1)(b)). The current proposal does not cover the situation where the owner believes a factual error has been made. The proposal needs to include this and provide examples of what type of documents are envisaged under here (eg, evidence of previous strengthening such as a building consent, code compliance certificate for the work).

The methodology must also state that a new engineering assessment if not required where appropriate previous assessments have been carried out. This is covered in the note on p15 of the discussion document but is not clearly stated in the methodology. Guidance to owners and TAs needs to make this clear.

**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?**

The methodology has to state that if the ISA/DSA follows the prescribed process and is undertaken by a suitably qualified engineer then the TA must accept the assessment. ICA understands that a driver for the use of profile categories and pushing costs of an ISA onto owners is that TAs do not generally have structural engineering skills and that the proposed approach provided them with the assurance required that the assessments were robust and could be relied on. If a TA wishes to challenge the ISA/DSA then it must pay for those costs.

There is a risk that the owner gets caught between their engineer saying there is sufficient information and the TA saying there is not. There needs to be a process where these disputes can be resolved quickly and at shared cost. The determinations process is available but will be at the owners' costs and has a three month process, and this will be quickly become backlogged as the legislation is implemented.

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

The methodology must clearly state that if a TA opts to obtain a peer review, it is at its cost and not the owners, and the results of the peer review must be made available to owners. ICA does not agree with WCC's proposal that owners bear the costs if the TA requires a peer review. However, as stated in the response to Q24, ICA is concerned that TAs can seek a peer review of any assessment that follows the prescribed process.

ICA supports the establishment of a prescribed methodology to avoid the problems Wellington owners have experienced of widely variable assessments. The effectiveness of the methodology will depend on how well the engineering fraternity commit to using the prescribed approach. This comes down to how MBIE is going to ensure that all engineers are trained, how uptake and competency in the use of the prescribed methodology will be monitored, and what happens if engineers are not following the prescribed process. Most owners are not able to ascertain this without commissioning another engineer to undertake a peer review at additional costs.

**Determining if a building is earthquake prone**

Proposal at a glance	What this does	Why
<b>Determining if a building is earthquake prone (section 4.5)</b>	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

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

ICA is concerned that a lot of terminology is very open and needs to be defined carefully (as BCCG has also noted), including the use of injury or death given the other references to life safety hazard. We question the use of 'foreseeable' and whether it is needed at all; foreseeable over what period – the 15 (or 7.5) years the owners have to strengthen the building? If MBIE is trying to cover changes of use that would increase occupancy, then these must be known at the time of the assessment, rather than leave it so open.

The text has to include that this test is a consequential criterion of (a).

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

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

**Assigning earthquake ratings**

Proposal at a glance	What this does	Why
<b>Assigning earthquake ratings</b> (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?

Yes, noting that we do not agree with the two earthquake rating categories, and the methodology must state that the %NBS is that specified by the engineer in the engineering assessment.

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

ICA notes WCC's response to this question regarding clarification of liability for costs of a DSA if the engineer is not confident the ISA reflects the building's expected behavior. Owners and bodies corporate must rely on the integrity of the engineer to provide reliable guidance as to whether an ISA is sufficient or not, and to explain in language that the client can understand why an ISA may not be sufficient. It will largely depend on the relationship between the client and the engineer. A DSA incurs significant costs (\$10,000 - \$80,000 excl GST) that owners can ill-afford if it is not necessary.

There is already an indication that some engineers will do not an ISA; this may be because they don't understand the prescribed methodology yet or do not support it. What support will MBIE provide to owners to help them get some guidance in this situation? What steps are the engineer fraternity peak bodies and MBIE taking to ensure pressure on owners to undertake unnecessary DSAs does not occur?

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

## Criteria for recognising previous assessments

Proposal at a glance	What this does	Why
<b>Criteria for recognising previous assessments</b> (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?

ICA supports the ability to recognize previous assessments undertaken prior to the commencement and agrees with the criteria specified, with the exception of the evidence that an interior and exterior inspection was undertaken and the lack of detail on TAs obligations when a previously completed assessment is not accepted.

There is no definition of interior and exterior inspection for ISAs or of the extent of 'evidence' that must be required. The IEP template (included in the Engineering Assessment Guidelines) only has a checkbox; this should be sufficient for evidence for previously completed assessments. ICA hopes that quality engineers would have completed an interior and exterior inspection, but it is unreasonable to apply a yet to be established definition for the methodology retrospectively. In the (hopefully) unlikely event the engineer did not complete a visual inspection, a separate report should be sufficient.

The TA must specify in writing the specific quality issues if a previously completed assessment will not be accepted and provide an opportunity for the owner and their engineer to respond. This is covered in the key responsibilities (p38), but not in the actual proposal and nor does it provide the right of response.

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

ICA does not agree with WCC's recommendation that geotechnical assessments be required for previously completed assessments.

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?

ICA restates our concerns that the intent to provide certainty for those owners that have completed assessments and strengthening (where required) is being undermined by parts of these proposals. Footnote 7 (p39) contradicts the statement on p13 of the discussion document. Refer to Q9 for further details.

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

see next page

### **Status of the methodology**

The methodology must be communicated as a legislative instrument (with an explanation of what that means to owners, engineers and TAs). ICA recommends that the Engineering Assessment Guidelines have a similar status (ie, legislative instrument) as some parts of the Guidelines will be referenced in the methodology. The use of the term ‘Guidelines’ is a concern as it implies optional – when the objective is to get all engineers following the same process to avoid the current variability issues.

ICA would prefer that the full set of Guidelines is incorporated by reference, with the specific parts referenced in the methodology being mandatory. It is unclear which specific parts of the Guidelines are intended to be incorporated by reference; these should be explicit in the methodology.

Having the methodology seen as a legislative instrument provides some assurance to owners that they will have an opportunity to review any changes and reduce the temptation for TAs to develop their own processes or variations.

### **Lack of timeframes for TA to confirm whether a building is earthquake prone**

ICA is concerned that there are no timeframes for a TA to make a decision on an engineering assessment. While some owners may not be concerned about the length of time, others (eg, those in multi-owner residential buildings) will want to get certainty so they can move on with their lives. TAs need to resource sufficiently to enable them to process the engineering assessments in a reasonable timeframe. Feedback from members indicates ongoing concern about the timeframes given the volume of buildings, the length of time to complete the investigations in multi-owner environments, and now the 12 month deadline for 300 buildings.

Feedback indicates that in some, possibly exceptional, cases there can be prolonged debates between the TA and the owner’s engineers about the seismic rating. The owner is bearing the cost of that as the engineer will either have allowed for that contingency or will be charging on an hourly rate. Some guidance must be provided to TAs and owners about what the expected turnaround time should be given the standard methodology.

### **Who goes to bat for the owners caught in the middle?**

There has been some feedback that the professionals (eg, engineers, architects, project managers) involved in disputes with the TA may defer to the TA to maintain their relationship and avoid problems with future work they may bring before the TA. This approach could lead to professionals agreeing to compromises and ‘selling’ these to the owners as ‘this is the only option’. There needs to be access to low cost mediation in these situations.

Or the TA may be placing unreasonable constraints on an owner before they will get the approval. In one case, WCC required that the plans for unwanted options be fully drawn up at a cost of \$14, 000 – 20,000 because it was a non-heritage building in a heritage area. The preferred option (the third that had been developed) enabled the building to get to a higher seismic rating, which achieved public safety and economic resilience outcomes, but not heritage outcomes. While approval was eventually given, these costs should not be imposed on owners. Where does the owner go to resolve these disputes without incurring yet more cost?

Peer reviews are also being required of proposed strengthening solutions before consent is provided. There has to be limits on this or TAs will err on the side of caution and impose unnecessary additional costs on owners. TAs requiring peer reviews have to be specific about the parts of the solution that are being questioned. Regulations have to provide some protection for owners against unreasonable demands.