SUBMISSION
EARTHQUAKE COMMISSION PUBLIC INQUIRY

Engineering New Zealand (formerly IPENZ) is New Zealand's peak professional body for engineers. We are New Zealand's strongest and most influential voice on engineering issues. Our membership is growing, with more than 22,000 members who want to help shape the public policy agenda.

OUR INFLUENCE

Last year, Earthquake Commission and Greater Christchurch Regeneration Minister Megan Woods approached Engineering New Zealand to help with resolving outstanding residential earthquake insurance claims. It was clear that engineering assessment was at the heart of some of the complex outstanding claims. There was a need to navigate a way forward that all stakeholders could have trust and confidence in.

We accepted this opportunity because over the past eight years, we have received a number of complaints from homeowners about the competence and conduct of engineers involved in the assessment of damage and remediation for insurance purposes. Our disciplinary processes are not designed for the purpose of dealing with the complex issues that arise in insurance claims. We recognised that the way insurance claims were being resolved was not always working and something had to be done. We also wanted to help the Government improve its response to natural disasters in the future.

In December 2018, we launched our new expert engineering panel to support the Government's Greater Christchurch Claims Resolution Service (the GCCRS) and the Canterbury Insurance Tribunal. The expert panel's role is to help resolve the engineering issues in insurance claims and help the claim move forward. The panel has been highly successful, with nearly 100 referrals to our engineering panel since December. We are about to recruit more members to our panel to meet the high demand.

But we know our panel is reacting to long-standing disputes rather than pro-actively preventing disputes from arising in the first place. We want to share what engineers have learnt from being engaged in claims resolution for eight years and how EQC can apply these lessons in responding to the next natural disaster.

We've set out below a high-level summary of some of the issues we're thoughtful about in the system of disaster response. We see the opportunities for improvement lying not just with EQC but how the system

as a whole works together. We would welcome the opportunity to discuss these systemic lessons and ways EQC and the sector can improve in preparation for the next disaster with Dame Silvia Cartwright.

PUBLIC EDUCATION AND PLANNING

What we've seen is that the public could be better informed about what an insurance response involves, and who can help them navigate through the process. EQC is well placed to lead this work. It includes:

- encouraging homeowners to have a record of the health of their house, including an understanding of its structural condition, so that if disaster strikes they have clear evidence for professionals to work from; and
- setting public expectations about what the insurance process looks like and where they can go for help (for example, our website now has important information for homeowners about how to engage an engineer with a template letter of engagement that anyone can use).

It also includes a systemic response, with EQC, insurers and local government working together to reduce our collective risk by increasing building resilience and sustainable development, for example, developing a national storm water and flooding plan and guidance and stopping development in flooding areas. Our **Engineering A Better New Zealand** series includes an engineering view on seismic resilience, and the steps we must take as a nation to better understand and respond to risk.

IMMEDIATE DISASTER RESPONSE

The Canterbury earthquake sequence challenged New Zealand. We weren't well prepared for the scale of damage to property that we witnessed through the earthquakes or how to manage such a large-scale insurance response.

Non-engineers were engaged to conduct initial damage assessments, which often lead to homeowners and insurers receiving inadequate and inaccurate advice from the outset, making disputes inevitable down the track. As we note below, earthquake damage assessments are complex exercises that should only be carried out by appropriately trained engineers. In addition, New Zealand did not have a pool of trained forensic structural engineers. Forensic engineering is a complex discipline and the majority of our engineers have had to learn the art of forensic engineering as they went.

Ideally EQC would have a pool of appropriately qualified forensic engineers who they can call on to conduct initial assessments when a disaster occurs. But we recognise that in large scale disasters there may not be enough engineers. The other option is for EQC to have a pool of trained building professionals who have checklists of the key information they should be gathering (including photos) and clear guidance for when an expert engineering assessment should be triggered. This will help ensure appropriate escalation to engineers so that homeowners and insurers are receiving the right engineering input at the right time. Timely engineering advice in initial damage assessments will go a long way towards preventing later issues.

THE PROBLEM FOR INSURANCE CLAIMS

Engineering issues preventing resolution

Engineering issues sit at the heart of many disputed insurance claims and many claims are unresolved because of different engineering assessments. In developing our services for the GCCRS we've focussed on building a resolution framework that will work today and into the future to help parties move forward when a dispute arises.

An engineer engaged by a homeowner and an engineer engaged by an insurer can come to separate expert opinions on how a house has been affected by the earthquakes. They must look at the house after the earthquake and make assumptions about what the house was like before the earthquake, how the earthquake affected it, and the best way to reinstate the house in response to that damage. These questions require professional judgment and interpretation of regulatory standards. The landscape is complicated even further by uncertainty, such as how to interpret the insurance policy standard. Engineers' ability to make definitive assessments depends upon the ability to observe damage, and it is not always possible to deconstruct structures to determine the damage. Every earthquake is unique and teaches us more about building performance. Further, certain reinstatement strategies may be appropriate in one case but not another.

In the insurance environment, our members experience in Greater Christchurch is that where an engineer engaged by a homeowner has come to a different conclusion from an engineer engaged by the insurer, the insurer has tended to rely on their own engineering report and disregard other engineering advice. In too many cases one engineer's report has been discounted as 'wrong'. This is because of a misunderstanding that engineering is an exact science, where there is one right and wrong answer. In fact, engineering is about the application of scientific principles to make things work safely and as such is a matter of professional judgement based upon working assumptions.

If a homeowner believed that their voice was not being heard and their engineering evidence was being ignored, they would be unlikely to settle, and claims would proceed to Court. This approach fostered an adversarial rather than resolution-focused process. It also expended public resources, often unproductively.

EQC has the opportunity to lead the way for insurers by encouraging engineers in these situations to work together to understand any differences of opinion, rather than to pit engineers against each other, frustrating claimants and creating a perception that engineers are advocates for insurers or homeowners.

A possible solution

The ideal way to prevent engineering disputes arising in an insurance claim process is for the insurer and the homeowner to agree to engage one engineer together at the outset. The parties would receive one engineering report that they can have trust and confidence in. This can prevent the difficulties that arise when there are multiple engineering reports sought be each party to the claim. We have developed a **template letter** that insurers and homeowners can use (or adapt to use) to jointly engage one expert.

We developed a model for the GCCRS to help claims with differences of engineering opinion move forward when the parties are presented with multiple and differing reports. In our model, if an engineer for a homeowner and an engineer for an insurer disagree, an independent facilitator will guide the two engineers through a technical discussion to understand why technical differences exist and attempt to find a way forward.

Facilitators are experienced senior engineers with extensive technical knowledge and experience in post-earthquake building assessment and reinstatement. The purpose of the facilitation is to enable the two engineers to provide clarity to their clients about where their opinions are aligned, and where and why they are different. The engineers will often agree on a recommendation for how the insured and the insurer can move forward through the engineering issues.

Case example

We were approached about an unresolved insurance claim that was frustrated due to a difference of engineering opinion. The property was allegedly damaged by the Canterbury Earthquake Sequence - there were cracks in the concrete slab. The homeowner had engaged an engineer who determined that the cracks were earthquake related (**Engineer A**). The insurer engaged an engineer who determined that the cracks were shrinkage, due to the construction of the property, and not earthquake related (**Engineer B**). Prior to our involvement, the insurer was relying on Engineer B's report and disregarding Engineer A's report. The homeowner trusted Engineer A but not Engineer B, and refused to settle based on Engineer B's report.

One of our facilitators met with the two engineers onsite to have a technical discussion. It became clear that the key area of difference was the cause of the concrete slab cracks. Engineer A based their view on the Ground Penetrating Radar (GPR), which indicated voids under the slab. They considered that this indicated that the cracks were earthquake related. Engineer B considered that the cracks were shrinkage because the shaking in the area was lower than in other areas of Christchurch and there was an opinion by a geotechnical company that discounted GPRs generally. Once the discussion got to this point, it became clear that the key ambiguity was whether there were voids under the slab. The engineers agreed that, if there were voids, the cracks would be earthquake related and if there weren't voids, the cracks would be shrinkage related. At this point, further testing could be done to determine whether the voids existed, and this would determine the outcome.

If the insurer had maintained their view that one engineer is 'right' and one is 'wrong', then the claim would remain frustrated as the homeowner would have no faith that the settlement was fair. By empowering the engineers to explain the differences, the parties were able to get to an outcome which worked for everyone.

WHAT NEXT?

Much of the difficulties encountered through the EQC resolution process has stemmed from a misunderstanding of the role of engineering in the claims resolution process. Our success in unsticking those claims shows that getting the right engineering advice at the right time is critical to resolving insurance claims.

We would welcome the opportunity to speak to Dame Silvia Cartwright further about our experience with EQC and key take-aways in person.