

CANTERBURY EARTHQUAKES LEGACY LESSONS TO BE LEARNT

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**engineering
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te ao rangahau

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INTRODUCTION

This case study summarises the webinar ‘Legacy Documents from the Canterbury Earthquakes Informing Future Events’ presented by Engineering New Zealand and the New Zealand Claims Resolution Service (NZCRS). The webinar focused on the engineering response to one of New Zealand's most significant seismic events and highlights the legacy documents that were developed, a pivotal resource developed from collective experiences to guide the management of future natural disasters, insurance claims, and recovery processes with efficiency, consistency, and empathy.

The webinar was presented by

Tania Williams – General Manager Engineering New Zealand. Tania was the General Manager responsible for the Christchurch Earthquake Expert Engineering Panel (now the Engineering New Zealand Natural Disaster Recovery Panel). Tania introduced the webinar and gave an overview of the Panel and Legacy Documents developed by Engineering New Zealand.

Darren Wright – Director, New Zealand Claims Resolution Service (NZCRS). Darren was the Director of the Greater Christchurch Claims Resolution Service (GCCRS) for four years before leading the change to expand the services offered as the NZCRS. In this webinar Darren shared the background of the New Zealand Claims Resolution Service, the services they provide to homeowners, and their latest learnings following the North Island weather events.

Dave Brunson – Technical Advisor, Engineering New Zealand. Dave is a recognised leader in the building, infrastructure, emergency management and research sectors. The majority of his work involves the leadership and co-ordination of complex multi-agency projects across these sectors. Dave has led the development of the Engineering New Zealand Legacy Project.

In this webinar, Dave describes the Legacy Project undertaken by Engineering New Zealand for NZCRS in the first half of 2023, key learnings in relation to future natural hazard events, and provides a brief overview of regulatory compliance issues relevant to repairing houses damages from natural disaster events.

Emily Walton – Barrister. Emily is a general civil litigator with specialist expertise in disaster, insurance and construction dispute work. She has been heavily involved in residential and commercial High Court earthquake claims following the 2010/2011 Canterbury Earthquakes. In this webinar, Emily provides a legal perspective on learnings from the Canterbury earthquake and tips for engineers working in the residential natural disaster damage repair space.

PANEL AND LEGACY DOCUMENTS OVERVIEW

Tania Williams

THE CHRISTCHURCH EARTHQUAKE EXPERT ENGINEERING PANEL

The Christchurch Earthquake Expert Engineering Panel was established in December 2018 at the request of Minister Megan Woods, and played a crucial role in providing engineering appraisals, peer reviews, and mediations. The Panel provided technical services to the GCCRS, EQC and the Canterbury Earthquake Tribunal and was instrumental in resolving over 420 disputed claims, underscoring the value of expertise and collaboration in disaster recovery efforts.

In the wake of the Auckland flood events and Cyclone Gabriel in early 2023, the Greater Christchurch Claims Resolution Service was transitioned into the New Zealand Claims Resolution Service, expanding its reach to a nationwide scale. The newly named Natural Disaster Recovery Panel continues to offer invaluable support and resources for recovery and resolution.

The following engineers were part of the Expert Engineering Panel, either as Panel Members or Engineering Advisory Group Members.

Christchurch Earthquake Expert Engineering Panel and EAG Panel Members

Alan Dallas, Andrew Marriott, Ana Pereira, Chris Burrell-Smith, Dave McGuigan, Don Bruggers, Elliot Duke, Geoff Bunn, Geoffrey Farquhar, Gregory Clark, Jan Kupec, Jitendra Bothara, Julius Long, Mary Ann Halliday, Murray Frost, Nick Traylen, Paul Campbell, Philip Cook, Phil Paterson, Robert Kamuhangire, Simon Finn, Steven Knowles, Terry Kayes, Warren Batchelar, Dick Beetham (deceased)

Engineering Advisory Group Technical Members

Barry Brown (SESOC), David Whittaker (NZSEE), Tony Fairclough (NZGS), Dave Brunson (Engineering New Zealand Technical Advisor)

LEGACY DOCUMENTS

The creation of the legacy documents was a collaborative effort, led by key contributors including technical input from Dave Brunson, Stephen Knowles, and Julius Long with legal input from Christopher Boys and Emily Walton. These were all pivotal in the document's development and the project benefitted from their expertise, as well as the dedication of numerous individuals who reviewed and refined these critical resources.

The role of the documents is not only a record of past efforts but as a blueprint for future disaster management. These documents are important in shaping resilient and empathetic responses to natural disasters and are a vital tool for future preparedness and recovery efforts, underscoring Engineering New Zealand's commitment to excellence and innovation in disaster management.

NEW ZEALAND CLAIMS RESOLUTION SERVICE

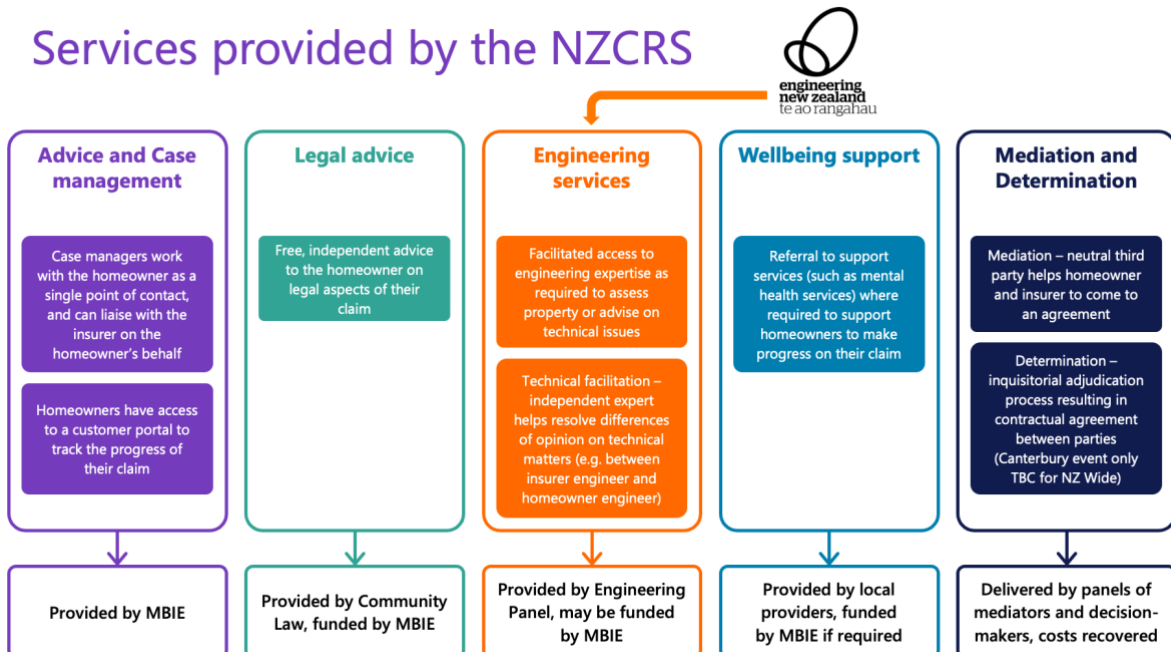
Darren Wright



WHAT IS THE NZCRS?

The NZCRS was established to offer comprehensive support to homeowners affected by natural disasters. Originating from the Residential Advisory Service in 2013, which focused on providing independent legal advice to those impacted by the Canterbury earthquakes, the service expanded with the Greater Christchurch Claims Resolution Service in 2018. This expansion aimed to address the increasing legal and wellbeing challenges faced by homeowners. By 2024, these services amalgamated into the NZCRS, adopting a national focus and offering a unified approach to disaster-affected homeowners across New Zealand.

Services provided by the NZCRS



HOMEOWNER-CENTRIC APPROACH

Central to the NZCRS's mission is the prioritisation of homeowners' needs. Emphasising independence and impartiality, the service transitioned to full funding by the Crown in 2018, eliminating potential biases from insurance company funding. This approach ensures decisions are made with homeowners' best interests at heart.

KEY PARTNERSHIPS AND SERVICES

A pivotal partnership with Engineering New Zealand has been instrumental in delivering clarity and fairness in engineering assessments. The NZCRS has introduced several services delivered by the Expert Engineering Panel aimed at assisting homeowners through various challenges:

- **Initial Appraisal:** A brief, engineer-conducted report including a site visit, offering homeowners a high-level understanding of structural damage.
- **Peer Reviews:** For homeowners disputing insurance or EQC engineering reports, offering an independent review by an expert panel engineer.
- **Facilitation:** A service where competing engineering reports are reconciled by a panel engineer to agree on technical aspects.
- **Reinstatement Recommendations:** An approach where both parties agree to be bound by an engineering report's on damage and reinstatement methodology. The number of homeowners taking up this service is increasing as it brings finality and resolution.

CHALLENGES AND LESSONS LEARNED

The following challenges and observations are related to the aftermath of the 2023 North Island Weather Events, and specifically address issues homeowners have encountered with insurance companies and the structural integrity of their homes:

1. **Damage Assessment and Repairs:** Insurance companies often removed damaged internal linings of homes without adequately assessing which structural elements were affected. This has led to challenges in determining what needs to be replaced to ensure the homes' structural integrity.
2. **Silt in Building Cavities:** A significant issue, especially on the East Coast, involves dealing with silt trapped between external cladding and vapor barriers, complicating repair processes without removing the cladding entirely.
3. **Flooring Concerns:** In Westport, the replacement of hardwood flooring with chipboard flooring, sometimes placed too close to damp ground, has been problematic. Efforts have been made to address these concerns with insurance companies to ensure more robust building materials are used.
4. **Insurance Settlements:** There has been a trend of insurance companies making assessments and providing interim payouts to homeowners, who are then encouraged to obtain their own expert evaluations and quotes for repairs to ensure fairness and accuracy in settlements.
5. **Insurance Withdrawal:** There is a growing concern about insurers withdrawing from properties categorised as high-risk (similar to the "red zoning" after the Canterbury Earthquake sequence), affecting homeowners' ability to obtain insurance.
6. **Resource Strain:** The demand for geotechnical and other engineers has surged, partly due to insurance companies and EQC securing these services, which strains resources and complicates the repair and assessment processes for homeowners.

These issues underscore the importance of accurate insurance assessments and the challenge of insurance withdrawal from high-risk areas.

CONCLUSION

The NZCRS's development and the collaborative effort with Engineering New Zealand reflect a significant advancement in New Zealand's approach to disaster response. By focusing on homeowner needs, ensuring independence, and leveraging expert partnerships, the service aims to provide fair, efficient, and empathetic support to those affected by natural disasters. The NZCRS has an ongoing commitment to learning and improving disaster response strategies for the future.

LEGACY GUIDANCE TO SUPPORT RESIDENTIAL RECOVERIES FOLLOWING FUTURE NATURAL DISASTER EVENTS

Dave Brunsdon

LEGACY TOOLBOX

The Canterbury Earthquake Legacy Project was undertaken by Engineering New Zealand for NZCRS in the first half of 2023. Initiated just before the 2023 North Island Weather Event, the project aimed to equip engineers with clear reference points and tools at the start of the recovery phase following future events that enable assessment, investigations and preparation of repair specifications to be of a high standard.

Achieving consistency across engineers from the outset will minimize the nature and extent of future disputes between homeowners and insurers.

The legacy documents were completed with input from the Expert Engineering Panel and the Engineering Advisory Group, and in consultation with stakeholder representatives from the Homeowners Advisory Group, private insurers, Toka Tū Ake EQC and lawyers.

KEY COMPONENTS OF THE LEGACY DOCUMENTS

1. **Engineering New Zealand Instruction and Brief:** This is regarded as the central document to enable consistent engineering outputs, clarifying damage definitions from insurance contracts and the required standard of reinstatement.
2. **Guidance for Homeowners:** A navigational tool for homeowners on what to expect from engineers engaged either by them or by other parties, including template Letters of Engagement. It is also a useful reference for engineers working with homeowners.
3. **Guidance for Engineers on Residential Damage Assessment and Reinstatement:** Outlines general principles and good engineering practice for engineering assessment of natural disaster damage to residential dwellings, and the development of appropriate repair strategies.
4. **Canterbury Earthquakes Recovery Engineering Journey:** Reflections on the key aspects of the ‘journey’ for engineers in order to provide insights to inform future residential recoveries from all natural hazard events.
5. **Toolkit for Facilitators and Engineers on Insurance Law:** Provides guidance for facilitation roles and the basics of insurance law for engineers.
6. **Reference Library:** Key technical documents relevant to engineering assessments, including MBIE Residential Guidance, MBIE/NZGS Geotechnical Modules, BRANZ publications and others.

THE ENGINEERING JOURNEY

This report reflects on the engineering challenges encountered during the Canterbury earthquakes, such as:

- Understanding the nature of the damage to floors and foundations caused by liquefaction (a phenomenon not previously encountered)
- Designing repairs to meet insurance contract and regulatory requirements, with a view to avoid similar damage in future events
- Navigating repair vs rebuild considerations
- Working through the challenges of older houses with only moderate levels of earthquake damage and differing degrees of pre-existing damage, and navigating with due regard again to insurance contract entitlements and regulatory requirements.

Key themes that emerged from discussions around the engineering journey included:

1. The importance of keeping engineers informed and provided with relevant technical guidance and information
2. Ensuring that the view through the homeowner lens is paramount
3. The importance of the Greater Christchurch Claims Resolution Service and Canterbury Earthquake Insurance Tribunal in resolving claims.

Key points in relation to future natural hazard events

- Establishment of locally focused engineering leadership groups and technical clearinghouses is considered the best mechanism to inform the work of engineers in regions significantly affected by natural disaster events, and to promote consistency and share good practices.
- The use of Technical Clearinghouses is the best mechanism to keep engineers from within and beyond affected regions informed on impact information and the developing event-specific good practice (an example being the establishment of the Hawkes Bay Engineering Leadership Group in response to damage resulting from Cyclone Gabrielle).
- The rapid development and circulation of technical guidance covering event-specific issues is important to achieve consistent practice, particularly how key Building Act provisions should be applied.
- There is a need to have an interface between homeowner representatives, insurers and those providing oversight to the development and application of technical guidance.
- The importance of the letter of engagement for engineers being in a standard format which clarifies the responsibilities and duties of an engineer engaged to undertake residential damage assessments, including reference to the key insurance reinstatement requirements applicable to the property.

- The need for engineers undertaking damage assessments to have specifically developed forensic investigation knowledge and reporting skills (and training) and being able to communicate their findings in an appropriate way.
- Stronger communication between the legal and engineering professions as every event will have its legal nuances as early disputes unfold. Therefore there is a need to ensure greater clarity on common interpretations of key regulatory provisions and insurance contract clauses at the early stages of an event recovery (or as standing guidance).

Accessing legacy documents

The legacy documents aim to improve preparedness and response to future natural disasters, emphasising the importance of learning from past experiences to enhance recovery efforts. These documents highlight the collaborative effort and support from various stakeholders in creating this comprehensive resource. They are available on the [Engineering New Zealand website](#) or can be [downloaded directly](#).

LEGAL LEGACY: WHAT WE HAVE LEARNT AND WHAT'S NEW

Emily Walton

One of the things that became really apparent when Cyclone Gabrielle and the Auckland Anniversary Weekend disasters happened was how much of what we learnt from the Canterbury Earthquake response is relevant to other disaster claims and how much information and support there is available for professionals working in this space. for example from NZCRS and Engineering New Zealand.

WHO HAS TO PROVE WHAT?

The home or building owner must prove the disaster damage and required repair/reinstatement. When preparing a report for a homeowner, engineers need to be aware that their recommendations need to satisfy the balance of probabilities that it is more likely than not that this is the damage sustained from the disaster, and this is what's required to repair it.

Multiple events

It is possible for building and homeowners to bring more than one claim if there has been more than one disaster event. In Christchurch it was the aftershocks and in Auckland it was the Anniversary Weekend event then Cyclone Gabrielle. When reporting on disaster damage caused by multiple events, the report needs to identify and allocate the damage and requisite repairs between the two events. Ideally, the engineer not only states the damage was worsened by the second event, but points to the increased or different repair scope following the second event. This will help EQC/the insurer and the homeowners understand the position.

Pre-existing conditions

If the house or building has pre-existing damage or is in a poor condition, that doesn't bar a natural disaster claim. It simply means that the engineer needs to distinguish between pre-existing and disaster damage when writing the report and the engineer should explain why the disaster exacerbating the pre-existing damage or condition means further repairs are required. Proving the additional repair work that is required is the key.

Note

Some insurers now have insurance policy wordings where they say they will undertake the assessment of the house or building and it will be for them and their expert to decide the policy response. This is in direct contrast with case law and something to watch. If a home or building owner does not accept what the insurer and their experts are saying, they are perfectly entitled to commission their own reports to dispute the insurer's position.

WHAT IS DAMAGE?

A structural element of a building is physically damaged if its physical state has been measurably or visibly altered by the disaster in a negative way. The engineer needs to be able to show a measurable change. Just suspecting that there may be changes and damage within a structure is not enough. A forensic analysis of indicator damage, in wall linings, floor coverings and so on is required. The change also needs to be more than *de minimis*, which means trivial or minimal and the alteration or change affects the original functionality of a structural element or affects the appearance of an aesthetic element. This has been confirmed by the Court, and this is what needs to be proved.

Imminent damage

We are seeing imminent damage as a significant issue in relation to land claims following the events last year. The Earthquake Commission Act 1993 doesn't just cover damage that has already happened during the disaster, it also covers imminent damage that will follow the disaster damage. There's no definition of imminent damage in the current EQC Act. There is in the new Natural Hazards Insurance Act, this is that additional damage may happen within the 12 months after the disaster event. EQC is applying this 12 month period of imminence to claims under the current Act.

Technically, that requirement doesn't come into force until the middle of this year, but that is what is being imposed now. From an engineering reporting perspective where you believe that the property (the land and/or the building) is likely to sustain damage within the next 12 months you will need to explain the damage mechanism and the likely extent of the future damage and the timeframe in which it may occur.

At the moment there are reports from insurers' experts saying, 'there's this many square meters of land damage and an additional number of square metres of land that's going to be imminently damaged', but without any explanation of why this is their opinion. So be forensic and be clear about explaining your views.

WHEN NEW REPAIR STANDARD

After the Canterbury earthquakes, the EQC Act and most insurance policies required repairs to:

*"A condition substantially the same as but not better or more extensive than its condition **when new.**"*

No-one really understood what repairs to a "when new" condition meant. Engineers didn't know what their brief was. Ultimately the courts have been quite clear about what a *when new* repair standard is. For a structural element you need to restore the function as it was when new, and for an aesthetic building element, restore the way it looked when it was new. The courts have confirmed that you don't need to create an exact replica, and you can use currently available building materials and methods. Section 17 of the Building Act 2004 that says the building repair work itself must comply with the Building Code and most insurance policies include an allowance for additional work required to ensure the repairs are compliant. However, by virtue of Section 112 of the Building Act, any existing non-compliant building elements that are not being repaired don't need to be upgraded or brought up to current Code. You will also need to take into consideration health and safety and durability considerations.

Less common were the policies requiring repairs to an 'as new' condition. The Courts found this was a temporal rather than qualitative standard and means as if it were new today. Application of this standard is tricky though, so it's worth recommending your clients seek legal advice if they have an 'as new' policy.

Carve outs in policy wording

In Christchurch a lot of the cost involved in repairs ultimately ended up being additional foundation, bracing and strengthening works to comply with the Building Code (and applicable NZ Standards). Some insurance policies now are quite specific in what is allowed in terms of costs of complying with current Code requirements. So again, if this is an area where there's concern or confusion, it's worth the homeowner taking some legal advice about what that particular policy means. NZCRS may also be able to help with this.

LAND: EQC STANDARD OF REPAIR

The land standard of repair is different because it's under the EQC Act only. Insurers don't insure land and most of the insurance policies out there at the moment specifically say they won't pay the cost of stabilizing or repairing land or preparing sites for building works or for repairs.

EQC does cover land but it doesn't cover the whole of the site. It only covers a certain defined area within the site; an eight metre diameter from the house plus the main accessway. The land doesn't need to be replaced exactly or completely, only "as circumstances permit" and in a "reasonably sufficient manner." Any reinstatement repair work or rebuild for retaining walls, bridges and culverts must meet the Building Code, but the EQC Act only provides indemnity cover for these land structures. What is actually happening in relation to both land damage and the land structures (retaining walls, bridges and culverts) is that they are being cash settled.

What I am seeing is that insurers are obtaining reports for landslip zones that say, for example, you are going to need three 20 metre wide by 6 metre long in ground parapet walls to repair the land, which will cost \$1.2 million. However, the market value of the damaged land is \$43,000 so EQC cash settles for \$43,000. In the meantime, obviously the homeowner can't repair the land for that sum. So, we are looking down the barrel of a real conundrum. Particularly when the insurers are also saying that the repairs to the house including foundations and there is an assumption that the ground is good, even where, for example, the ground has fallen away from under the foundations or is moving. So there's a massive disconnect and a great big hole in funds received. Without specially designed enhanced foundation or land remediation, the homeowner can't do anything. And I think it's going to be a real problem. The only way around it is to include in the repair methodology enhanced foundations that can accommodate the actual ground conditions and explain that the local council won't consent 'good ground' foundations on a landslip site. They won't meet the durability requirements of the Code. Insurers are pushing back on this, but this is the only avenue available for homeowners in this conundrum (and their property is not classified Category 3). I don't know how this will play out, but I just foreshadow that if you're getting involved in writing reports, you may ultimately be involved in mediation and court proceedings because I think that until that issue is resolved, we will end up with a lot of disputes.

TIPS ON REPORTING

- Use the Engineering New Zealand Letters of Engagement. They've been through many, many pairs of hands and at this point reflect really what the case law and standard practice has become. It means you don't need to recreate the wheel and means that everyone's singing from the same song sheet, which really helps when it comes to dispute resolution.
- When you are preparing your reports ensure they comply with the Engineering New Zealand Code of Ethical Conduct and the High Court Expert Witness Code of Conduct. Basically, be impartial. Act with honesty, objectivity and integrity and stick to your knitting - only provide expert opinion within your area of expertise.
- Be aware of insurers looking to full and finally cash settle claims with no structural engineering assessment at all, including when houses are over the edge of landslips. This may be because insurers think potential Category Three properties don't warrant the cost of structural assessments and the owner will probably take the buyout option if offered. It's unclear what the Councils' views on this is though.
- Do not be an advocate, in your reporting leave the advocacy to the lawyers so provide technically accurate advice irrespective of your client's interests.
- The people who are managing these claims at the insurers have got a big job ahead of them and they deal with these claims day in and day out. And if they start seeing the same reports being presented with the same angle all of the time, that's not site specific, you lose credibility, and then you're not serving your client well. Be site specific.
- Avoid generic criticisms of building practice regulations or guidance. There are other forums for you to raise concerns in that space.
- Make sure you include photographs, measurements, test results, diagrams, site and building plans. Capture damage when you can and especially with land movement that changes over time, capture the damage visibly and with measurements include quantities, areas, measurements and target levels, so that a costing can be done based on your report.
- If you are provided with other reports on the property, explain why you agree or disagree, calmly and neutrally.

UNDERSTANDING THE REGULATORY CHALLENGES

Dave Brunson

The fundamental issue in regard to regulatory challenges is that there are no specific provisions in the Building Act for repairs. Repairs are regarded as alterations and therefore Section 112 of the Building Act (Additions and Alterations) applies.

DO YOU NEED TO DO REPAIRS TO DAMAGED BUILDINGS?

Only if dangerous and/or insanitary, or if it is a multi-unit building of two or more storeys that becomes earthquake prone.

WHEN IS THE DATE TO WHICH THE S112 'NO WORSE THAN BEFORE' PROVISIONS APPLY?

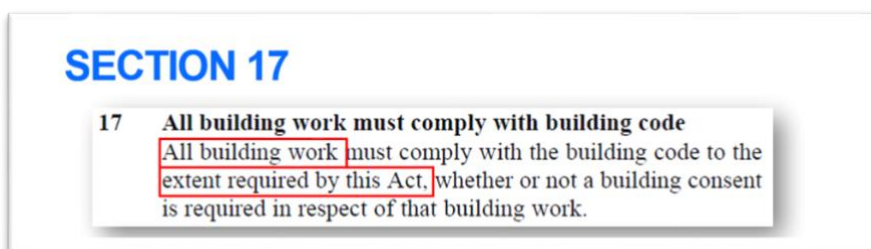
The day before the repairs (alterations) are undertaken, not the day before the event causing the damage. This highlights an immediate point of divergence with what the insurance contract requires.

WHAT IS THE LEVEL OF COMPLIANCE REQUIRED?

To navigate this question, and you need to consider the *building*, the *element*, the *repair components* in turn. It is the interaction between Sections 17 and 112 that requires careful navigation.

Section 17

Section 17 requires that 'all building work must comply to the building code to the extent required by this Act'.



It should be noted that 'building work' does include sitework - work on a building site, including earthworks, preparatory to, or associated with, the construction, alteration, demolition, or removal of a building.

Section 112

Section 112 refers to continuing to comply with other provisions of the building code, noting that from an engineering perspective we are referring to structure and durability.

SECTION 112

112 Alterations to existing buildings

(1) A building consent authority must not grant a building consent for the alteration of an existing building, or part of an existing building, unless the building consent authority is satisfied that, after the alteration, the building will—

- (a) comply, as nearly as is reasonably practicable, with the provisions of the building code that relate to—
 - (i) means of escape from fire; and
 - (ii) access and facilities for persons with disabilities (if this is a requirement in terms of section 118); and
- (b) continue to comply with the other provisions of the building code to at least the same extent as before the alteration.

B1 Structure
B2 Durability

Exactly how s17 applies depends on the scope and purpose of the repair, noting the reference to ‘to the extent required by the Act’. More importantly, the scope and purpose of the repair is typically framed by the provisions of the insurance contract as well as the damage.

To illustrate the difference we can look at a residential building with repairs to be undertaken to its perimeter foundation. You are looking at the repair components and the element to be repaired. If you are repairing the foundation beam, the new building work is the typically the repair components which can be, in the case of the foundation beam either epoxy to repair cracks or the addition of a replacement section of the foundation beam. In this situation, the repair components need to comply with the building code, as does any new section, but not the foundation as a whole.

You can think about damaged plasterboard in a similar way - you may elect to repair the fixings, the wall sheet, or the whole wall. Again, it is the new building work that s17 requires compliance with the building code.

WHAT IS THE COMPLIANCE PATHWAY?

When is a building consent exemption appropriate? What is the difference between a general exemption and a discretionary exemption? This is where section 42A refers to Schedule One of the Building Act.

Schedule 1 (1)

The Category One building work exemption relates to situations where a comparable component or assembly is used and it is basically in exactly the same position. In this situation there is no need to inform the council.

SCHEDULE 1 (REFER SECTION 42A)

Part 1 Exempted building work

General

1 General repair, maintenance, and replacement

- (1) The repair and maintenance of any component or assembly incorporated in or associated with a building, provided that comparable materials are used.
- (2) Replacement of any component or assembly incorporated in or associated with a building, provided that—
 - (a) a comparable component or assembly is used; and
 - (b) the replacement is in the same position.

Note key exclusion:

- (b) complete or substantial replacement of any component or assembly contributing to the building's structural behaviour or fire-safety properties;

For a Schedule 1 (1) exemption where the approval of a TA is not sought, it is important to keep a record of work done on the council property file. This is in the interest of the homeowner so that when they eventually come to sell the property, there is a transparent record of what work has been done.

Note however the particular key exclusion that structural aspects of a repair cannot be undertaken as a Schedule 1 (1) exemption. So that takes you invariably to a discretionary exemption.

Schedule 1 (2)

This exemption is where the owner or the engineer needs to apply to the territorial authority for a discretionary exemption. This requires the same documentation essentially as a building consent, but it is a different process of approval by the Territorial Authority not the BCA.

SCHEDULE 1 (CONTINUED)

2 Territorial and regional authority discretionary exemptions

Any building work in respect of which the territorial authority or regional authority considers that a building consent is not necessary for the purposes of this Act because the authority considers that—

- (a) the completed building work is likely to comply with the building code; or
- (b) if the completed building work does not comply with the building code, it is unlikely to endanger people or any building, whether on the same land or on other property.

WEBINAR QUESTIONS AND ANSWERS

Can anyone find those 'legacy documents' on the Engineering New Zealand website?

Yes, <https://www.engineeringnz.org/public-tools/new-zealand-claims-resolution-service/what-engineers-need-know-earthquake-claims/>

Are there criteria around the proximity to a building of a landslide when is it imminent damage? i.e. when the landslide is not on the property

Under the EQC Act as it currently stands, the definition of physical loss or damage includes any physical loss or damage to that property that is imminent and is the direct result of a natural disaster. So if the imminent threat is from off site, i.e. if an offsite risk of land from above is likely to threaten the insured land and the insured property at this site, then that would be covered.

An important clarification is that any structures built to protect from imminent damage must be on the insured land.

With durability, can you clarify, in regard to conditions of the insured insurance whether this is from new or from the time the original structure was built?

The repair work must comply with the durability requirements of the building code. So the repair work must comply with the current durability requirement, and hence is from the date that work is done. If the building itself didn't meet the current durability requirements prior to damage then you get into the section 112 consideration of what improvements or additional work is required.

Is training being looked at for different areas in regard to likely hazards in these areas?

We see the some of this legacy material as being the springboard for some further training material. As we reflect on the whole continuum from engineers responding in the hours and days following events through to working in recovery, which is the focus of this discussion, it's fair to say we know there's never enough training to equip engineers in the space. But we now have over the last year really picked up the threads on the likes of rapid building assessment for response.

In the Engineering New Zealand Letter of Instruction, the definition of damage refers to function of the element. Does Engineering New Zealand have advice on the function of the main structural elements like foundations, bracing, firewalls and chimneys?

There isn't a standard list of functions in the residential space and this is the challenge of engineering within residential construction. While certain things are obvious, like designated bracing elements and modern foundations, the challenge is when you're looking at older houses where both the vertical and the lateral resistance comes from different means. I think the actual function is something that an engineer assessing a building after the event primarily needs to form their own view on. This was one of the challenges, for example, in flood affected houses where plasterboard lining had been removed, and the uncertainty as to which of those elements in buildings constructed prior to NZ3604 are actually bracing elements, so that function can typically be case specific to evaluate.

If the land damage is separate from foundations, however, the land is part of the foundation system (geotech engineers kept pointing out the soil - structure interaction). The structural ability (or function) of the foundation is dependent on the land and the built elements performing well to ensure adequate performance of the superstructure. We cannot separate the land performance and built foundation structure – any foundation repair design will need to include both parts. Does Emily have any suggestions on how to deal with foundation and land repairs?

One of the things that has happened post the Canterbury earthquakes is the High Court was asked to decide about this in relation to increased flooding. The High Court found that when that building went down with the land, that was land damage, not house damage. But where we have the land falling away from the piles we've got a different situation again, because obviously the piles have lost the functionality completely. My suggestion if you're looking at that is to see whether it's possible to design a foundation that mitigates against the ground loss, or the ground damage as part of house design, rather than presenting a ground solution. This is because it'll depend again on the detail of the actual insurance policy as to whether there'll be a response or not, but you're more likely to get some kind of response from the insurers I think if you say – the land supporting the foundation has gone, so we need to have piles that are four meters longer and down on the bedrock and have a movable coil around them so they manage the movement of the land - something like that. I know that there were claims here in Christchurch up on the hills where that was what the foundation solution was, to mitigate against ground movement and they were ultimately met. So I think at this point, put the design into the foundations as the answer.

Do the engineers on our panel have the current residential experience?

Yes, one of the criteria on which the engineers for our panel are selected is current residential repair experience, as indicated on our website.

All new building work should comply with S17 first, then the engineer or designer needs to undertake the S42a and S112 checks to make sure the new building work does not make the Building as a whole perform worse. So S17 first, then S42a and S112 checks?

The difference between S42A and S112 is that S42A is used where there's no building consent, and S112 when there is a building consent. One thing we have learned is that if you can, it is ideal to get a building consent all of the time, as you want to get that information on the property file if you can.

Is there a definition that can be referenced for what would be classified as a landscaping wall and when a wall would be classed as a retaining wall?

Based on our experience, if it's retaining soil, even if it's quite short, EQC and the insurers will call it a retaining wall.

In regard to carve outs, won't this require the engineer to ask the homeowner about the fine print of their insurance policies?

EW: That is a really good question and it is tricky. I'm raising those for you so that you can be aware of what's going on in a dispute context. I don't know necessarily whether you need to be thinking about those carve outs. But if you do have the opportunity to see the policy, I think you just have to refer the homeowner to get legal advice. If there's any questions about that, it can become problematic when the engineers are interpreting the insurance policies and obviously what I've given you is fairly generic. So best to just refer the homeowner and I think NZCRS can give the homeowner a good start.

DW: The team are well schooled up on that. But remember, we can also provide the free legal advice through Community Law New Zealand who have a lot of experience in this space now. I know often you don't want to refer homeowners because of the cost, so if that's an issue, get them through to us sign them up, and then we can get them some free legal advice.

When there is a disagreement between an engineer, owner, insurer, and other stakeholders regarding the forensic investigation of imminent damage from an earthquake, it presents a complex challenge. Addressing this issue requires careful negotiation, clear communication, and often the involvement of neutral third parties. What do you recommend in this case?

DW: Definitely. But I would be really clear, and I think Emily touched on it before, around staying in your lane. So, if you have an expert opinion then it's your right to stick to that unless somebody can convince you otherwise. And they're generally not somebody like a case manager at an insurance company or for that matter, the homeowner. It really is important that you take your position and stick to your position unless you are given other reasons to change. So if we all do that and all stay in our lane, then life gets a lot easier.

What is NZCRS position on the EQC new resolution process -and their request for submissions? Is this best dealt with individually, and is NZCRS/Engineering New Zealand putting in a submission ?

DW: I am really happy to take a call at any time to have a conversation around this. I think our general view is that the dispute resolution is a very busy space and getting quite confusing for homeowners. So we've got some concerns around adding additional services into that space but I definitely think both Engineering New Zealand and those involved in some of the dispute resolution services in Canterbury should be looking give some feedback because it will be really useful for EQC to hear things about independence and impartiality and the importance of people having a chance to have their say. So I really encourage anyone who can to provide feedback.

An engineer is asked, within a brief, to identify pre-event structural damage as part of an assessment. The engineer carries out the assessment and does not report on the structural cracking damage clearly evident to a chimney base. The omission is notified to the engineer with photographic evidence. The engineer is requested to update its report to include the omitted damage and an explanation as to what the reasonable cause is, but despite being requested to do so, refuses. Can the matter be referred to ENZ for support ?

TW: Use the Engineering New Zealand complaints process.

From within the 'post quake' community, if we feel there are useful reference documents absent from the library, can we request as members that they are uploaded?

TW: Yes, either contact me or the Panel Advisor.

General comments made

- For those wanting to gain a further understanding of how the EQC Act responds to land damage, imminent damage etc check out our free guidance and training modules:
 - [EQCover training units help engineer assessments](#)
 - [Toka Tū Ake EQC 1: Introduction to EQC and EQC Act](#)
 - [Toka Tū Ake EQC 2: Understanding residential land](#)

Is there an easily accessible database of the case law that EQCs interpretation of the act is based upon?
- Foundation function definition – maybe it's simply this: The function (or purpose) of a foundation (regardless of when it was built) is to transfer building loads to the soil so that the soil is not overstressed and does not undergo settlements that would cause a loss of amenity, loss of durability, loss of structural ability (strength, stiffness), or cause damage to the superstructure and other connected elements.
- As part of demonstration of compliance, recommend [this article by John Gardiner](#), particularly in relation to specification.

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Waikato/ Bay of Plenty/ East Coast Region: Steven Knowles, Conrad Jenkins

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FOR FURTHER INFORMATION

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