

LESSONS LEARNED
**CHRISTCHURCH
EXPERT EARTHQUAKE
ENGINEERING PANEL**

LEGACY DOCUMENT 9

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This document forms part of the set of information referred to as the 'Legacy Toolbox Package'. This set of documents was prepared by engineers from the Christchurch Earthquake Expert Engineering Panel and the Engineering Advisory Group. Review and input have also been provided by Engineering New Zealand, GCCRS (now NZCRS) and representatives from the Legal, Insurer and Homeowner Advisory Groups.

OVERVIEW

The following references have been identified as useful for engineers assessing residential damage and preparing repair specifications following a natural disaster.

While some of the references, for example the MBIE guidance, are specific to earthquake damage and repair or rebuild, other parts have potentially wider application.

REFERENCE TABLE

Document		Link
MBIE	Residential Repair & Rebuild Guidance (including technical Q&As)	https://www.building.govt.nz/building-code-compliance/canterbury-rebuild/repairing-and-rebuilding-houses-affected-by-the-canterbury-earthquakes/ https://www.building.govt.nz/building-code-compliance/canterbury-rebuild/updates-clarifications-residential-guidance/index-to-the-technical-qa/
MBIE/ NZGS	MBIE/NZGS Geotech Modules	https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/geotechnical-guidance/#jumpto-earthquake-geotechnical-engineering-practice-series
BRANZ	BU551 Learnings from the Canterbury earthquake series	https://www.branz.co.nz/pubs/bulletins/bu551/
	BU548 Repairing plasterboard after an earthquake	https://www.branz.co.nz/pubs/bulletins/bu548/
	BU536 Upgrading piled foundations to resist earthquakes	https://www.branz.co.nz/pubs/bulletins/bu536/

	BU565 Canterbury Earthquakes Royal Commission: Key recommendations	https://www.branz.co.nz/pubs/bulletins/bu565/
	SR100 Repair and reinstatement of earthquake damaged houses - derivation of repair techniques: Phase 2	https://www.branz.co.nz/pubs/research-reports/sr100/
	SR123 Repair and reinstatement of earthquake damaged houses - derivation of repair techniques: Phase 2	https://www.branz.co.nz/pubs/research-reports/sr123/
	SR158 Repair and reinstatement of earthquake damaged houses - derivation of repair techniques: Phase 3	https://www.branz.co.nz/pubs/research-reports/sr158/
	SR265 Effect and remediation of the loss of building lateral stiffness caused by earthquake loading	https://www.branz.co.nz/pubs/research-reports/sr265/
	Research Now: Seismic Resilience #1 - Performance of irregular seismic bracing in light timber-framed buildings	https://www.branz.co.nz/pubs/research-now/seismic-resilience/seismic-resilience-1-performance-irregular-seismic-bracing-light-timber-framed-buildings/
	Research Now: Seismic Resilience #2- Managing earthquake-prone council buildings	https://www.branz.co.nz/pubs/research-now/seismic-resilience/seismic-resilience-2-managing-earthquake-prone-council-buildings/
	Issue 666 Bulletin: Restoring a Home after Flood Damage	https://www.branz.co.nz/pubs/bulletins/bu666/
EQC	EQC Assessment Manual	https://www.eqc.govt.nz/our-publications/eqc-assessment-manual/
	New Zealand Geotechnical Database	https://www.eqc.govt.nz/resilience-and-research/data-and-modelling/new-zealand-geotechnical-database/
NZIS	NZIS Review of Survey Practices in Relation to the Canterbury Rebuild	https://www.surveyspatialnz.org/Attachment?Action=Download&Attachment_id=2685
SESOC	Epoxy Resin Injection as a repair strategy for concrete – SESOC Journal Vol 32 No 2 September 2019	https://www.sesoc.org.nz/download/12-epoxy-resin-injection-as-a-repair-strategy-for-concrete-sesoc-journal-vol-32-no-2-september-2019-pdf
GNS Science	New Zealand Water Table	https://catalogue.data.govt.nz/dataset/national-water-table
Engineering New Zealand	Emergency Response Information for Engineers	https://www.engineeringnz.org/engineer-tools/emergency-response-information-for-engineers/