



Geotechnical guidance

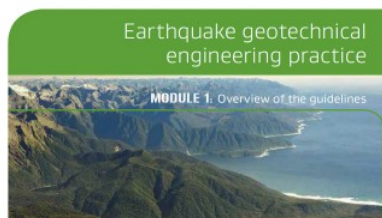
These geotechnical guidelines have been developed by MBIE and a number of collaborators in order to assist and educate geotechnical professionals on earthquake geotechnical engineering practices.

Earthquake geotechnical engineering practice series

MBIE has partnered with the New Zealand Geotechnical Society (NZGS) to develop a series of earthquake geotechnical engineering guidelines (in the form of modules). The guidelines explain current practice in earthquake geotechnical engineering.

The main purpose of the guidelines is to improve engineering practice and increase the seismic performance of buildings and infrastructure.

The guidelines have been prepared, primarily, for the use of practising geotechnical engineers but may be of interest to other engineers and council officials.



Module 1: Overview of the geotechnical guidelines

GUIDANCE

An overview of the geotechnical guidelines, including some technical detail on estimating ground motion parameters.

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/module-1-overview-guidelines/>)



Module 2: Geotechnical investigations for earthquake engineering

GUIDANCE

Module 2 of the geotechnical guidelines provides guidance on geotechnical investigation for earthquake engineering.

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/module-2-geotechnical-investigations/>)



Module 3: Identification, assessment and mitigation of liquefaction hazards

GUIDANCE

Guidance for the identification, assessment and mitigation of liquefaction hazards, replacing NZGS Module 1 (July 2010).

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/module-3-identify-liquefaction-hazards/>)

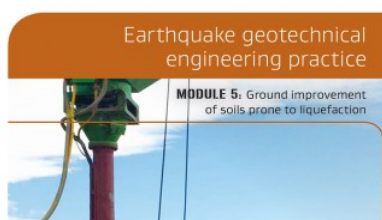


Module 4: Earthquake resistant foundation design

GUIDANCE

Principles for good foundation design, up-to-date practice and implementation of Royal Commission recommendations.

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/module-4-earthquake-foundation-design/>)

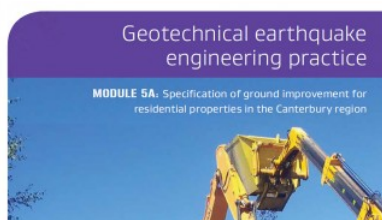


Module 5: Ground improvement of soils prone to liquefaction

GUIDANCE

Covers principles of ground improvement design, up-to-date practice and Canterbury earthquake recommendations.

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/module-5-ground-improvement-liquefaction/>)



Module 5A: Specification of ground improvement for residential properties in the Canterbury region

GUIDANCE

Specification for ground improvement, specifically for liquefaction mitigation in residential Canterbury properties.

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/module-5a-ground-improvement-canterbury/>)



Module 6: Earthquake resistant retaining wall design

GUIDANCE

Covers principles of seismic design of retaining walls of a routine nature throughout New Zealand.

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/module-6-earthquake-retaining-wall-design/>)

Other geotechnical guidance

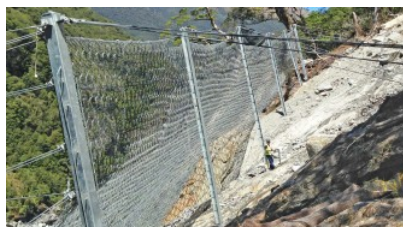


Planning and engineering guidance for potentially liquefaction-prone land

GUIDANCE

Guidance for land use planning and development in potentially liquefaction-prone areas.

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/planning-engineering-liquefaction-land/>)



Rockfall: Design considerations for passive protection structures

GUIDANCE

Guidance on the design of passive protection structure for mitigation of rockfall risk.

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/rockfall-design-considerations-for-passive-protection-structures/>)



Practice Advisory 17: Well-planned ground investigations can save costs

GUIDANCE

Why a well-devised, specific site geotechnical investigation is a key requirement for good building performance.

(<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/practice-advisory-17/>)

Geotechnical education

Build your knowledge with education resources that support the geotechnical guidance.

[Geotechnical education \(https://www.building.govt.nz/building-code-compliance/geotechnical-education/\)](https://www.building.govt.nz/building-code-compliance/geotechnical-education/)

New Zealand Geotechnical Society

The New Zealand Geotechnical Society is the affiliated organisation in New Zealand of the international societies representing practitioners in soil mechanics, rock mechanics and engineering geology.

[New Zealand Geotechnical Society \(NZGS\)](#)