

# Draft Standards New Zealand TS 1170.5 Released

*Advice for members on new Technical Specification proposing changes for determining earthquake actions in structural design*

## Disclaimer

The material contained in this document is intended as guidance only. All readers should satisfy themselves as to the applicability of the recommendations made and should not act on the basis of any matter contained in this document without considering, and if necessary taking appropriate professional advice on, their own particular circumstances.

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## Introduction

The Structural Engineering Society of New Zealand (SESOC), New Zealand Earthquake Engineering Society (NZSEE), and the New Zealand Geotechnical Society (NZGS) are pleased to advise members that Standards New Zealand has released a Draft of Technical Specification TS 1170.5 *Structural design actions – Part 5: Earthquake actions – New Zealand* for public comment.

The draft Technical Specification can be accessed at [TS 1170.5 Structural Design Actions - Part 5 Earthquake Actions](#), while the commentary is at [Commentary of TS 1170.5 Structural Design Actions - Part 5 Earthquake Actions](#).

The draft Technical Specification has been released for a 4-week consultation period. Once feedback has been reviewed by the committee and any necessary modifications made to the Technical Specification, Standards New Zealand will look to publish the document shortly thereafter.

## What is a Technical Specification?

Members may note TS 1170.5 is being released as a Technical Specification, in contrast to the existing NZS 1170.5 being a Standard. From a user perspective the distinction is unimportant. The distinction relates to the development processes used by Standards New Zealand, with Technical Specifications being used for documents intended to have a specified and relatively short life span before further development occurs.

## Background to TS 1170.5

A primary driver for development of the Technical Specification TS 1170.5 was the recent revision of New Zealand's National Seismic Hazard Model (NSHM 2022). Since release of the new NSHM a significant body of work has been carried out by both the *Seismic Risk Working Group* and the Standards New Zealand TS 1170 committee to determine how to integrate the NSHM into design practice.

More background regarding the NSHM is contained within the October 2022 SESOC, NZSEE and NZGS [Interim Advice on the 2022 National Seismic Hazard Model Release](#).

## Key messages regarding the Public Comment release of TS 1170.5

### Please review and provide feedback on the draft

- Public comment processes are the time for engineers to have our say on proposed documents. The more feedback provided by industry, the higher the likelihood that the final documents reflect our needs.
- SESOC/NZSEE/NZGS encourage members to review the draft, and provide any feedback that could improve the quality of the Technical Specification. Feedback can be provided directly through Standards New Zealand in accordance with the instructions accompanying the draft document, or alternatively by passing feedback to your society.

### NZS 1170.5:2004 remains the compliance pathway cited under B1/VM1 for new design

- The public comment Draft Technical Specification should not be used for design of structures. It may be altered before final publication.
- Even once the new TS is published, NZS 1170.5:2004 will remain the earthquake design action Standard cited by B1/VM1, and hence will remain a deemed to comply approach for demonstrating compliance with the Building Code.
- Citing the Technical Specification within the regulatory system and making it a deemed to comply approach would be a separate decision process. This may be informed by the voluntary use of the Technical Specification, as well as further public consultation by MBIE. The pace of any work in this regard may also be informed by the Government's priorities and commitments.
- Once published in its final form, TS 1170.5 could appropriately be used for the design of new buildings on a voluntary basis through an Alternative Solution pathway. Some clients may be interested in considering this. Using the Alternative Solution pathway enables the Technical Specification to be voluntarily tested in the design of new buildings before MBIE will consider whether to include it in the building regulatory system.
- For geotechnical design, updated Earthquake Geotechnical Engineering Practice Modules 1 and 2 are in preparation to facilitate the use of TS 1170.5. They will be issued when TS 1170.5 is published (i.e. following the consultation period). These modules will include updated information on determination of seismic parameters for geotechnical design (Module 1), and updated information on the measurement of shear wave velocity which is often needed for determining structural design actions from TS 1170.5 (Module 2).

- Module 1 (2021) should continue to be used in conjunction with NZS 1170.5:2004; however, Module 1 (2024) and Module 2 (2024) should be used for geotechnical design if TS 1170.5 is adopted for an alternative solutions design. Module 2 (2024) can also be used in conjunction with NZS 1170.5:2004.

**For Seismic Assessment of Existing Buildings, NZS 1170.5:2004 should continue to be used**

- Neither release of the Technical Specification, nor any future citation within the regulatory system will change the Earthquake-prone Building system. Under the Building Act 2004, Earthquake-prone Building ratings must be assessed using NZS 1170.5:2004. All seismic assessments, for EPB or other purposes, should continue to be made in accordance with the Building Act 2004 using NZS 1170.5:2004 to ensure that all assessments are consistent and comparable.
- There are no plans for TS 1170.5 to be introduced into seismic assessment in the foreseeable future.

**Additional media communications, and technical webinars on the changes proposed in the Draft TS 1170.5.**

MBIE have released information to accompany publication of the draft Technical Specification. Members are recommended to review this release, which can be found at [Leading the way for new seismic engineering practices | Building Performance](#)

Engineering New Zealand have also published a brief media statement which members may find helpful for communicating with clients and the public. This can be found at [TS 1170.5 – Draft open for comment | Engineering NZ](#).

Engineering New Zealand are facilitating a two-part series of webinars on the 27<sup>th</sup> and 29<sup>th</sup> of February to help viewers engage during the public comment period. These will explain the key changes from NZS 1170.5:2004 in the draft Technical Specification. Presenters will include members of the Seismic Risk Working Group and the Standards New Zealand TS 1170.5 Committee. Links to Parts 1 and 2 of the webinar can be found at [Technical Specification 1170.5 Webinar Part 1](#) and [Technical Specification 1170.5 Webinar Part 2](#).

It is anticipated that SESOC will develop and present more comprehensive seminars on the use of the new Technical Specification later in the year. It is likely that these seminars will coincide with future publication of the final version of TS 1170.5 after any further edits are made by the development committee.