



Building consents for Residential Dwellings and Substantial Additions/Alterations

In November 2019, the Ministry of Business, Innovation and Employment (MBIE) made changes to the NZ Building Code which limit the application of the B1 Acceptable Solution B1/AS1 so that it may not be used on ground prone to liquefaction or lateral spreading from 29 November 2021 onward. This was implemented by changing the definition of 'Good Ground' to exclude land with the potential for liquefaction and/or lateral spreading.

As a direct result of this National Guidance Tararua District Council commissioned a report prepared by Tonkin & Taylor in 2021 assessing the liquefaction susceptibility of the wider Tararua District and a draft practitioner's guide.

In addition, Council has also received a report prepared by GNS and commissioned by Horizon's Regional Council on Tararua District fault lines reclassification.

[Liquefaction Prone Land | Tararua District Council \(tararua.govt.nz\)](https://tararua.govt.nz)

[Tararua District fault lines reclassified in GNS Report \(arcgis.com\)](https://arcgis.com)

Following a series of internal discussions, it has been decided that these reports are best placed to feed into the District Plan review process where it, alongside other technical information, will be further refined and tested to inform a reviewed policy framework to manage and guide development in the Tararua district.

The District Plan review work has recently commenced with initial focus on the Residential and Rural Zones. A draft plan change is expected to be out for consultation in the second half of this year. We strongly encourage practitioners to engage

in this process to help shape the policy framework moving forward. In the interim and ahead of the District Plan review this is Council's process for building consents for residential dwellings and substantial additions/alterations.

Council is still required to give effect to the changes under the Building Act and for clarification we have outlined a process for building consents for residential dwellings and substantial additions/alterations.

Building Consent Process for Residential Dwellings and Substantial Additions and Alterations

Substantial Additions/Alterations is not defined in MBIE Guidance but TDC have interpreted this to mean additions/alterations that are equal to or greater than 50% or more of the existing building footprint (unless there is evidence of previous movement).

Please note that this does not include re-piling of houses (unless there is evidence of previous movement).

Step 1: The Designer will need to refer to MBIE Guidance & Tonkin & Taylor Liquefaction Vulnerability Mapping Classification:

The liquefaction vulnerability classification of your property has been mapped and is available on Council's Website at the following link [Liquefaction Prone Land \(arcgis.com\)](#)

Ground conditions will be required to be assessed so that foundations can be designed to conditions and reviewed to show appropriate designs have been provided. The Tonkin and Taylor liquefaction vulnerability study has highlighted large areas within the Tararua District where "*Liquefaction Damage is Possible*" and areas where there is insufficient information to determine the vulnerability. [Liquefaction Prone Land | Tararua District Council \(tararuadc.govt.nz\)](#)

To help identify suitable foundations for building work on sites subject to a liquefaction hazard, MBIE has developed the following resources to help councils, engineers and developers comply with this change. More information can be found on the MBIE website at - [Ensuring new buildings can withstand liquefaction effects | Building Performance](#)

Step 2: Is the proposed works located in a liquefaction damage is 'possible' or 'undetermined'?

If your property is located in either a 'Liquefaction damage is possible' or 'Liquefaction Category is Undetermined' area, you are required to engage a suitably qualified engineer or geotechnical engineer to carry out soil investigations to determine the foundation design. The process to follow has been outlined in Table 4.2 of the Tonkin & Taylor Practitioner Guide.

It is worth noting that if your engineer can't get down to the specified 4 metre depth, they will need to provide sound engineering justification for this departure. Please note that regardless of liquefaction risk at a site, shallow geotechnical investigations are already required for building consents in order to determine good ground pursuant to NZS3604:2011 and B1/AS1. B1/AS1 and NZS3604:2011 require boreholes and scala tests to a minimum depth of 2 metre, however, to determine the depth to ground water and refine the liquefaction vulnerability category it is preferable to increase that depth to 4 metre where possible.

[Guidance for Liquefaction Assessments in the Tararua District \(tararua.govt.nz\)](http://tararua.govt.nz)

Step 3: Who do you get to complete the soils assessment? You can engage a geotechnical professional¹ as this is their specialist technical area however, we don't have any geotechnical engineers within our District.

Council has agreed that you can engage a suitably qualified engineer to prepare this work however, to mitigate this risk Council reserve the right to engage Tonkin & Taylor to carry out a compliance review of their report.

Your suitably qualified engineer will need to be either an Engineering New Zealand member or a Chartered Professional Engineer under the CPEng Act 2002.

[Find an engineer | Engineering New Zealand \(engineeringnz.org\)](https://www.engineeringnz.org)

What is a Compliance Review? Tonkin & Taylor (T & T) have been engaged as Council's Geotechnical Engineering Experts. T&T will carry out the compliance review to confirm that your chosen suitably qualified engineer has followed an appropriate methodology and provided reasonable grounds for Council to be satisfied that the design meets Building Code requirements. This cost will be passed directly onto the customer – for a straightforward review this should cost no more than \$400-1200* and this will take 10 working days to complete.

It is important to engage the appropriately qualified engineer to mitigate further costs, should reports not be to required standards.

*Please note that you will be charged for actual costs of this review until a satisfactory conclusion is achieved.

Your suitably qualified engineer will recommend a foundation design that is appropriate for the in situ ground conditions and will mitigate any associated natural hazard risk including liquefaction risk. Do it once and do it right! We want your house to last the designed lifetime.

¹- MBIE Guidance "Earthquake geotechnical engineering practice Module 2. Geotechnical investigations for earthquake engineering November 2021" . The geotechnical professional should be a geotechnical engineer and/or engineering geologist who holds a current CPEng accreditation in the geotechnical practice area and/or PEngGeol registration, under the Chartered Professional Engineers of New Zealand Act 2002, or equivalent, with demonstrable extensive experience in investigating earthquake geotechnical hazards

