

The likelihood of liquefaction in Timaru District has been reviewed by Environment Canterbury.

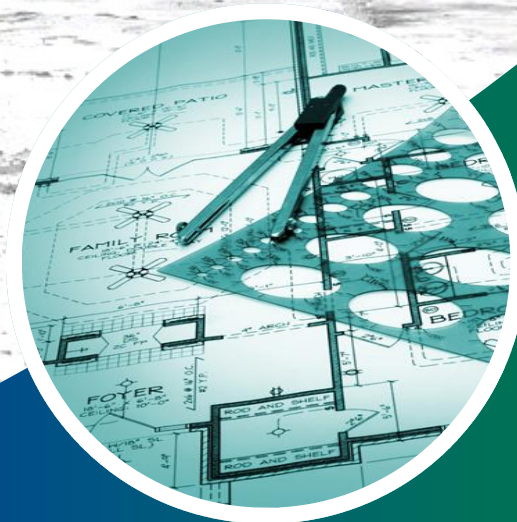
Understanding the potential for

Liquefaction

in Timaru District



In this online brochure, the Timaru District Council Building Unit offers some guidance in response to ECAN's report.



What is liquefaction?

During an earthquake some soils, if they are wet, can behave more like a liquid than a solid.

Water in the soil can be forced up to the ground surface through the easiest path it can find – often through cracks and crevasses in the ground or concrete.

The water takes silt and sand with it, forming sand "boils" or sand volcanoes, or when there is a lot of it, filling up

large areas with silt and sand.

The land above the liquefied soil is often tilted and sometimes sinks. How much the ground liquefies doesn't just depend on the soil type, it also depends on the depth of the water table and the amount of ground shaking.

But if soils have the potential to liquefy in an earthquake, it's good to build in a way that means the building will cope if the ground did liquefy.

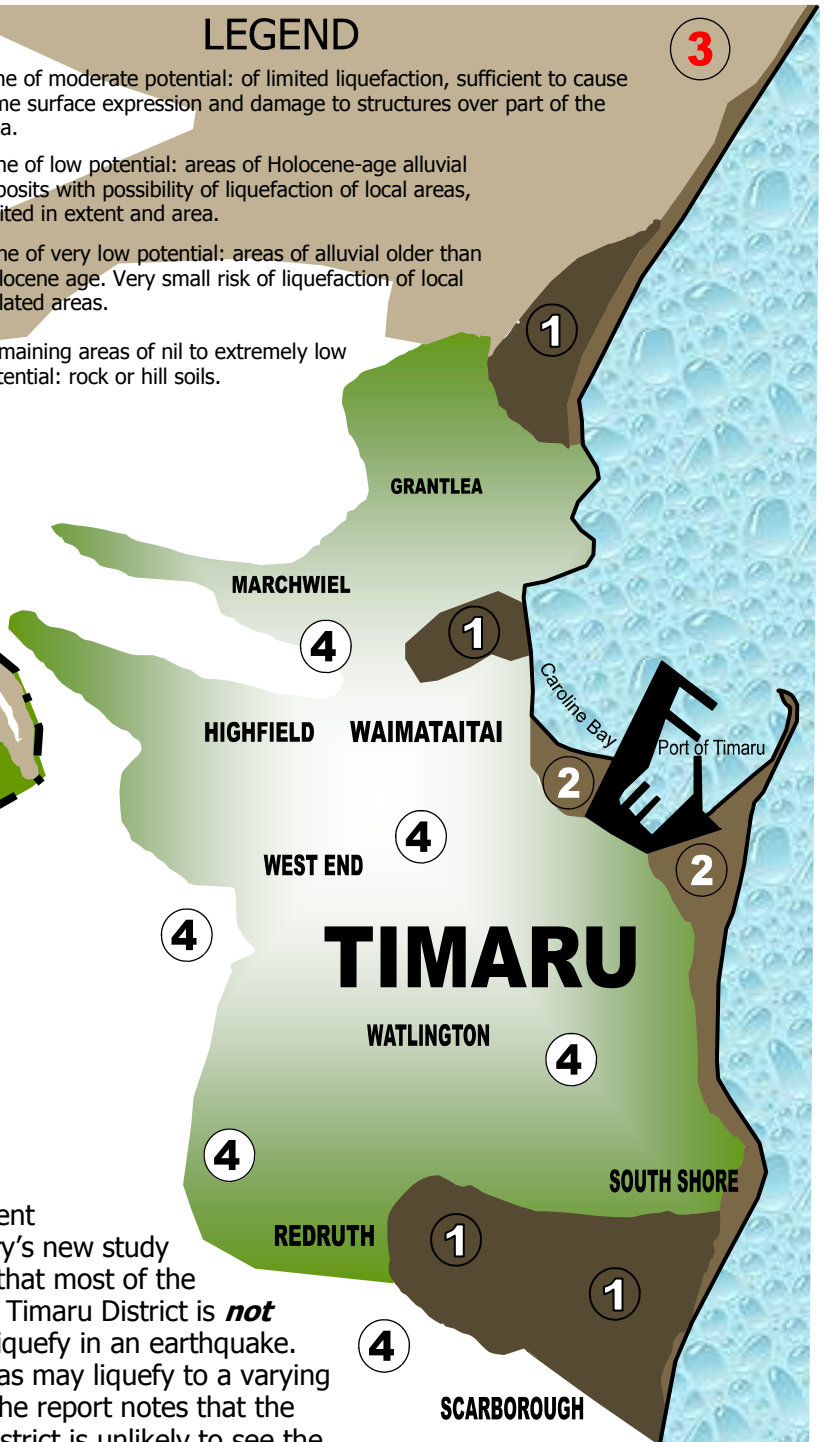
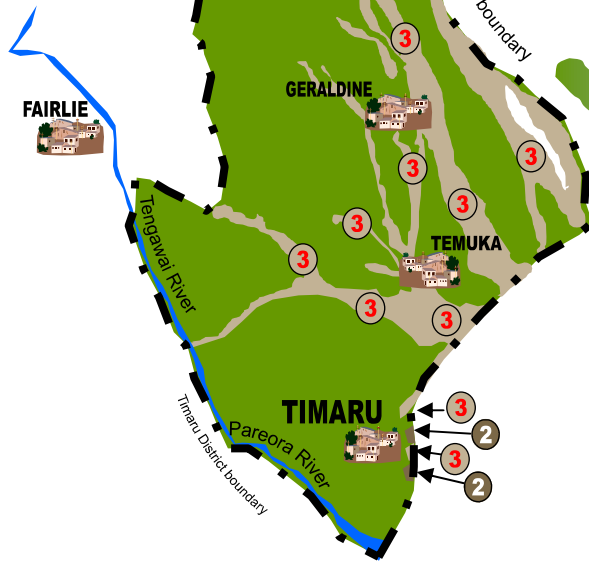
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LEGEND

- 1 Zone of moderate potential: of limited liquefaction, sufficient to cause some surface expression and damage to structures over part of the area.
- 2 Zone of low potential: areas of Holocene-age alluvial deposits with possibility of liquefaction of local areas, limited in extent and area.
- 3 Zone of very low potential: areas of alluvial older than Holocene age. Very small risk of liquefaction of local isolated areas.
- 4 Remaining areas of nil to extremely low potential: rock or hill soils.

Most of district safe from liquefaction



What you can do . . .

While the risk of liquefaction is generally considered to be low, the Timaru District Council recommends that in some areas those applying for a Building Consent investigate the risk factor in such areas or opt for stronger foundations, which may ultimately become a requirement.

Environment Canterbury's new study indicates that most of the ground in Timaru District is **not** going to liquefy in an earthquake. Some areas may liquefy to a varying degree. The report notes that the Timaru District is unlikely to see the suburb-scale liquefaction that affected eastern Christchurch. However, more engineering detail may be required in some areas. For Ecan's full report please go to:

www.ecan.govt.nz/liquefaction



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DISCLAIMER: Graphics and information in this online brochure are intended as a guide only and should not be considered a substitute for site-specific investigations and/or geotechnical engineering assessments for any project. The Timaru District Council advises that qualified and experienced practitioners should assess the site-specific hazard potential, including the potential for damage, at a more detailed scale.