

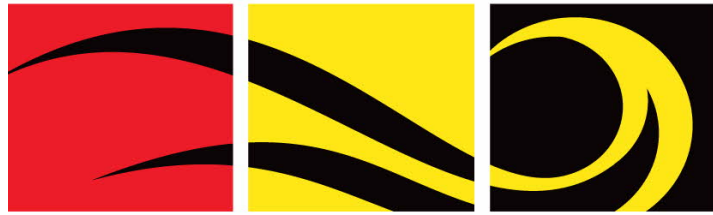
Hearing Closing Statement

**Hearing 27E: Natural Hazards and
Climate Change – Land Stability,
Liquefaction, and Mine
Subsidence**

Prepared by Grant Eccles

Date: 21 May 2021

Waikato



DISTRICT COUNCIL

Te Kaunihera aa Takiwaa o Waikato

I Introduction

1. My name is Grant Eccles. I am the author of the s42A report 27E, Natural Hazards and Climate Change – Land Stability, Liquefaction, and Mine Subsidence, and subsequent rebuttal report.
2. This closing statement follows the hearing held on 10, 11 and 12 May 2021.
3. No new issues emerged at the hearing from the evidence or presentations of submitters that have caused me to make amended recommendations to the Hearings Panel.
4. However, questions from the Hearings Panel have prompted me to refine a specific plan provision recommended in my original s42A report. I discuss this further below.
5. A consolidated version of Chapter 15 has been prepared, reflecting recommended changes from all Hearing 27 reports. Copies have been circulated to the Hearings Panel and placed at the same website location as this reply.

2 Hearings Panel questions/queries

6. In my s42A report I recommended, in response to submission 2136.1 from Shand Properties Ltd, the inclusion of a Controlled Activity Rule in the Huntly Mine Subsidence rule suite. The Hearing Panel queried whether the wording of the Matters of Control in the proposed rule were appropriately worded for their intended purpose.
7. I have reflected on that query and agree that the wording could be improved to provide more clarity to the Matters of Control listed and make the rule easier to interpret and administer.
8. My proposed amendments are set out below:

Rule 15.11.1A Controlled Activities

- (a) The activity listed below is a Controlled Activity in the Mine Subsidence Risk Area.

<u>Activity</u>	<u>Matters of Control</u>
<p><u>C1^[1]</u> <u>The construction or alteration of a building that is not provided for under Rule 15.11.1 where a Consent Notice is registered against the Record of Title confirming that a geotechnical assessment has been approved at the time of subdivision and the approved</u></p>	<p>(a) <u>The degree to which the requirements and recommendations of the geotechnical report approved at the time of subdivision have been incorporated in the building design.</u></p> <p>(b) <u>Whether confirmation is provided from a suitably experienced and qualified geotechnical engineer that confirms the proposed building development is consistent with the recommendations and requirements of the</u></p>

^[1] Report 27E recommendation on Shand Properties [2136.1]

<p><u>geotechnical report confirms that the ground is suitable for building development and the building development is in accordance with any recommendations of the geotechnical report.</u></p>	<p><u>geotechnical report approved at the time of subdivision.</u></p>
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9. Further, in the context of my recommendation that Council undertake District wide liquefaction mapping, the Hearing Panel discussed with me the effect and cost of the current rules requiring individual applicants to undertake a liquefaction assessment regardless of the location of their site in the District and submit it with their applications.
10. While I did not discuss this with the Hearings Panel during questioning, I note here for completeness that Section 15.13.2(a)(ii) of the Proposed Waikato District Plan allows for an alternative accepted method, observation or desktop study for determining liquefaction susceptibility. I understand this was included so that on sites where the ground conditions are clearly not likely to be susceptible to liquefaction applicants do not need to incur the cost of carrying out a full assessment.

15.13.2 Liquefaction Potential

- (1) For land use resource consent applications where the additional matters the Council will restrict its discretion to include liquefaction, as per Rule 15.12.3, the following information is required:
- (a) A preliminary geotechnical assessment in sufficient detail to determine:
- (i) the liquefaction vulnerability category, being either “liquefaction damage is unlikely” or “liquefaction damage is possible”, as shown in Table 4.4 in “Preliminary Document: Planning and engineering guidance for potentially liquefaction prone land – Resource Management Act and Building Act aspects. Pub MfE and MBIE, September 2017”; or
 - (ii) whether or not the site is susceptible to liquefaction using an alternative accepted method, observation, or desktop study.
11. However, I make it clear that my recommendation for Council to undertake district wide liquefaction mapping stands. In that regard I understand that the Level A mapping being undertaken by WRC will be available by the end of 2021.