

Memo

To:	Damien McGahan – Aurecon (Hamilton City Council processing Planner)		
From:	Ryan Tutbury – Tonkin & Taylor Ltd	Date:	8 September 2025
Subject:	Private Plan Change 17 – Te Rapa North Industrial – Technical Specialist Memorandum for Section 42A Reporting		
Technical Area:	Geotechnical Engineering		
Version:	Final		

Purpose

- 1 This memorandum has been prepared to provide technical assessment under section 42A of the Resource Management Act 1991 (RMA), in respect of geotechnical engineering matters in relation to the Private Plan Change 17 – Te Rapa North Industrial (PPC17).

Introduction

- 2 My full name is Ryan William Owen Tutbury. I am a Senior Engineering Geologist with Tonkin & Taylor Ltd. I hold the qualifications of Bachelor of Science in Geology and Master of Science with Honours in Engineering Geology from Canterbury University, New Zealand.
- 3 I have been retained by Hamilton City Council to provide geotechnical advice relating to the private plan change application submitted by Fonterra.
- 4 I provide regulatory reviews of land use and subdivision consent applications on behalf of Hamilton City Council (HCC) under a secondment arrangement and have worked in this role for approximately five years. In my work as a geotechnical consultant in Hamilton I have also undertaken numerous geotechnical investigations within the City and as a result I am familiar with the geotechnical issues commonly encountered in the geological setting of the subject site.

Code of Conduct

- 5 I have read the Environment Court Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023 and agree to comply with it. I confirm that the opinions expressed in this memorandum are within my area of expertise except where I state that I have relied on the advice of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

Scope

- 6 This memorandum covers the following:
- a. Consideration of the lodged and updated request.
 - b. Relevant matters raised, and relief sought, in submissions.
 - c. Recommended amendments to PPC17.

Executive Summary

- 7 This memorandum provides a technical assessment under section 42A of the Resource Management Act 1991 (RMA), focusing on geotechnical engineering aspects related to PPC17.
- 8 This memo covers:
- a. Review and assessment of applicant's geotechnical assessment against the relevant statutory provisions (e.g., RMA, Regional Policy Statement, District Plan).
 - b. Response to submissions.
 - c. Recommended conditions.
 - d. Conclusion.
- 9 By way of summary, in my opinion the provided information demonstrates that from a geotechnical perspective, the site's geotechnical risks can be mitigated subject to further detailed design, resource consent, building consent, and imposition of appropriate conditions of consent.

Documents considered

- 10 The following documents have been considered in the preparation of this assessment:
- a. *Te Rapa Private Plan Change 17 Request* (the request)
 - i. Appendix 05: Soil & Rock Consultants, 4 December 2024. Geotechnical Investigation for Proposed Private Plan Change at Fonterra Te Rapa, Hamilton. Reference: 220489, Rev A1.
 - ii. Appendix 09: Harrison Grierson, 12 December 2024. Te Rapa North Industrial, Illustrative Master Plan.
 - iii. Harrison Grierson, 12 December 2024. Te Rapa North Industrial, Structure Plan. The Submissions listed in Table 1.

Table 1: Submissions that raise geotechnical engineering matters

Number	Submitter
13.16	Waikato Regional Council

Analysis

Introduction

- 11 I have reviewed the information referenced in paragraph 10, focusing on geotechnical matters relating to the proposed plan change. My review has identified three key areas that would benefit from further clarification in relation to the identification and assessment of the geotechnical hazards present within the plan change area. I acknowledge that while these clarifications would be beneficial, they are not considered to form insurmountable barriers to future development but would serve to clarify aspects of the geotechnical assessment undertaken and inform future information and assessment requirements as part of subsequent development. In summary, these clarifications are in relation to:
- a. The level and spatial distribution of geotechnical investigation, review of existing historical imagery data and confidence in assessed groundwater levels based on the groundwater monitoring undertaken in the plan change area.
 - b. How the existing stability of the slopes along the Waikato River, within the plan change area and adjacent to the plan change area have been assessed and/or the requirements for further assessment of the stability of these slopes.
 - c. How the effects of certain activities (e.g., earthworks, stormwater ponds) may influence specific geotechnical hazards, such as stability and liquefaction, and the potential change in risk to neighbouring properties as a result of these activities.
- 12 I acknowledge that the geotechnical reporting by Soils & Rock Consultants has highlighted the requirement for further assessments to be undertaken as part of future development stages (resource/building consent).

Response to submissions

- 13 In response to the notification of the private plan change, several submissions have been received. Of these submissions, one referred to matters relating to geotechnical engineering.

Submission point 13.16 – Waikato Regional Council

Submission Point	Summary/relief sought	Analysis and recommendations
13.16	<p>The submitter supports in part the application but considers the statement in the plan change application that “the preliminary geotechnical investigation report in Appendix 5 found no geotechnical natural hazards (as listed in the Act) that were considered an undue impediment to future development for an industrial use, or that could not be reasonably addressed by typical engineering design and construction” underestimates the importance of the Geotechnical Report findings.</p> <p>The submitter recommends there should be a clear stipulation that any subsequent building consent applications must be subject to more intensive geotechnical investigation and should include a Level C or D liquefaction assessment.</p>	<p>Request rejected.</p> <p>The geotechnical engineering assessment provided with the application includes in <i>Section 14: Future work, that they, “recommend these aspects be subject to development-specific geotechnical investigation and assessment at the Resource/Building Consent stage (as appropriate)”</i>.</p> <p>There are existing statutory provisions for addressing these specific matters as part of future stages of the land development (e.g. Subdivision consent, Building Consent).</p>

- 14 The request by Waikato Regional Council seeks to highlight the need for further geotechnical investigation and analysis to form part of future building consent submissions. I support this and acknowledge that Soil & Rock Consultants do recommend further testing and assessment is undertaken at resource/building consent stages within their report.
- 15 The request by Waikato Regional Council seeks that a minimum Level C or Level D liquefaction assessment of liquefaction risk is undertaken as part of future building consent applications. I do not support this as I consider that differing types of development require differing levels of assessment. While best practice would be to undertake a Level C or D assessment at Building Consent stage, the necessity for a Level C or D assessment for liquefaction is not always warranted for the scale of the structure. There may be a sufficient level of existing information available to inform the liquefaction risk and/or the adoption of conservative foundation solutions to manage the potential risk. I consider that the required level of assessment should be subject to the judgement of future foundation designers with guidance from a suitably qualified and experienced geo-professional with justification of the level of the assessment as part of future resource/building consent applications.

Analysis

- 16 My review identified matters that I consider would have benefited from clarification for the future development of the plan change area. However, I consider that even in lieu of these clarifications, that there is a sufficient level of information and/or existing statutory provisions to enable future development of the land for the intended future land use. Based on the assessment provided, and my experience with the ground conditions in the Hamilton City District, the ground conditions and hazards identified are not atypical to other areas of existing development with the Hamilton City District. As such, I consider there to be engineering solutions to manage and/or mitigate the geotechnical hazards identified within the plan change area.
- 17 With respect to the clarifications that I consider would have been beneficial:
 - a. The level and spatial distribution of geotechnical investigation, review of existing historical imagery data and confidence in assessed groundwater levels based on the groundwater monitoring undertaken in the plan change area.
 - b. How the existing stability of the slopes along the Waikato River, within the plan change area and adjacent to the plan change area have been assessed and/or the requirements for further assessment of the stability of these slopes.
 - c. How the effects of certain activities (e.g., earthworks, stormwater ponds) may influence specific geotechnical hazards, such as stability and liquefaction, and the potential change in risk to neighbouring properties as a result of these activities.

I consider there to be existing provisions within the RMA (1991), the Building Act (2004), New Zealand Building Code and Hamilton City Operative District Plan that requires further assessment of the geotechnical hazards as part of resource and/or building consenting processes.

The assessment of the geotechnical hazards to support a subdivision/building consent should be undertaken by a suitably qualified and experienced engineering professional. These assessments should be supported by geotechnical investigations and review of relevant existing information (e.g., historic aerial imagery, groundwater level records) to inform the likelihood and potential risk of geotechnical hazards impacting future development. Where a potential hazard is identified, it should be assessed and mitigations/approaches for managing the potential hazard and associated risks are provided. Clarification is able to be sought in

relation to the assessment by the regulatory/building consent authority, prior to the granting the consent. The consent may also be subject to specific consent conditions or consent notices in relation to specific hazards if there is a residual risk. These existing provisions also require assessment of potential impacts of activities on neighbouring properties, and I consider them sufficient to address the potential effects as part of the resource/building consent processes, as is applied to the wider Hamilton City District.

The Hamilton City Operative District Plan includes existing provisions in the form of the 'Waikato Riverbank and Gully Hazard area' that requires assessment of slope instability risk to support resource consent applications. A portion of the site includes existing mapping of this hazard within the 'North block' and 'Southeast block' of the plan change area. An assessment prepared by a suitably qualified and experienced engineering professional should be provided with the consent application (where the rule applies to a development) and should be subject to further review at the time of the consent application by Council.

- 18 I consider that while the extents of all the geotechnical hazards are not well defined in the Soil & Rock Consultants report, future geotechnical hazard assessments will be required as part of later stages of development. The RMA (1991), Building Act (2004) and Hamilton City Operative District Plan include existing requirements for certain activities to not be at significant risk of natural hazards or worsen natural hazards on adjacent land or the land itself. These assessments will confirm the associated risk to the specific development and requirements for mitigations to manage the risk associated with the hazard. The future development still requires assessment by a suitably qualified engineering professional to assess the potential effects and impacts on the surrounding environment associated with the hazard and the mitigation.
- 19 I support the suggestion made by Waikato Regional Council that further *"stipulation that any subsequent building consent applications must be subject to more intensive geotechnical investigation"*. However, I acknowledge that there are already existing statutory provisions within Building Act (2004) and that the Soil & Rock Consultants report outlines that *"development-specific geotechnical investigation and assessment at the Resource/Building Consent stage (as appropriate)"*.
- 20 I do not support Waikato Regional Council's suggestion that future building consents should be supported by a Level C or level D liquefaction assessment as there are instances where this level of assessment is not always warranted. I acknowledge that this would be best practise but take into consideration that a Level C or D assessment for liquefaction is not always warranted for the scale of the structure. There may be a sufficient level of existing information available to inform the liquefaction risk and/or the adoption of conservative foundation solutions to manage the potential risk. I consider that the required level of assessment should be subject to the judgement of future foundation designers with guidance from a suitably qualified and experienced geo-professional with justification of the level of the assessment as part of future resource/building consent applications.

Recommended conditions

- 21 I recommend that the following conditions:
 - a. That future applications for subdivision/building consent are supported by a geotechnical hazards assessment specific to the proposed development, which includes mitigations and/or management approaches to the geotechnical hazards. That these assessments are prepared by a suitably qualified and experienced engineering professional. That these assessments are subject to review by the relevant regulatory/building consent authority prior to the award of a consent.

Conclusions

- 22 It is my opinion that the assessment by Soil & Rock Consultants provides a reasonable representation of the geotechnical hazards and soil conditions within the Plan Change areas and that they are typical of other land areas of similar use in the Hamilton City District. Provided that further investigations and assessments of the hazards are undertaken at future specific development stages, I consider that the hazards can be managed and/or mitigated through engineering solutions similar to those adopted in the Hamilton City District as part of other development activities. It is my opinion that, on the balance of information that I have reviewed, and subject to the information considered in this evidence, the geotechnical risks of the plan change area can be mitigated as part of site-specific proposal(s), such as resource consent and building consent processes and existing provisions with the Hamilton City Operative District Plan.
- 23 This report has been prepared for the exclusive use of our client Hamilton City Council, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that this report will be used by Hamilton City Council in undertaking its regulatory functions in connection with Private Plan Change 17.

Tonkin & Taylor Ltd

Report prepared by:



Ryan Tutbury
Senior Engineering Geologist

Authorised for Tonkin & Taylor Ltd by:



Bryn Quilter
Project Director