

BEFORE THE HEARING PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application to Hamilton City Council for Private
Plan Change 7 to the Hamilton City District Plan by
Green Seed Consultants Limited

**SUMMARY STATEMENT OF
REMALIA ELIZABETH PEARL SHARPLIN (GROUNDWATER)**

Dated 28 October 2021

INTRODUCTION

1. My full name is Remalia Elizabeth Pearl Sharplin.
2. I hold the role of Technical Lead – Hydrogeology at GHD Limited, a role I have held since 2016. I hold a Master of Science (Geology) from the University of Auckland (2008). I have 13 years' experience in groundwater and environmental science. I am a member of the following technical societies: Hydrological Society of NZ (Hydrosoc) and the International Association of Hydrogeologists (IAH).
3. I have recent and relevant experience as a groundwater scientist, including overseeing detailed site investigations and groundwater assessments for: Proposed Structure Plan areas located in areas of high groundwater and peat for Whanganui District Council (Springvale residential and Mill Road industrial/commercial Structure Plans); Three waters network upgrades for numerous sites for Wellington Water Ltd (Porirua Central Stormwater upgrade; Jervois Quay emergency stormwater upgrade, Dixon Street wastewater pump station, Taranaki Street wastewater pump station, and rising main); Three waters network upgrades for Auckland Council Healthy Waters (Clinker Place, Dingle Road, Eastbourne); and Transpower tower replacement and substation upgrades requiring construction dewatering.
4. I provided a report assessing groundwater matters arising under the proposed Rotokauri North Private Plan Change (**PC7**) dated 3 September 2021 which was included in Appendix D to the s 42A report.

CODE OF CONDUCT

5. I have read the Environment Court Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014 and agree to comply with it. I confirm that the opinions expressed in this statement are

within my area of expertise except where I state that I have relied on the evidence 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 OF EVIDENCE

6. I provide a summary of the findings in my report appended to the s 42A report, and comment on any relevant matters raised in the evidence of Green Seed and submitters.

SUMMARY OF REPORT

7. The desktop review completed by Beca of hydrogeological conditions at the site has appropriately collated the available information. Beca identified areas of knowledge gaps and made recommendations for additional work in order to fill these gaps.
8. The information provided by the applicant identifies a high groundwater table. Sufficient investigations have been conducted to determine the seasonal high groundwater level for the site. The high water table appears to be appropriately considered in the applicant's documents, including:
 - a) The geotechnical assessment, which has clearly documented groundwater monitoring over almost one year;
 - b) The Integrated Catchment Management Plan, which acknowledges groundwater levels are required to inform design relating to three waters management;
 - c) Pavement design, which considers where different types of pavements will be permitted, based on areas of high water table and soil permeability;

- d) The potential for peat to be encountered has also been identified and is likely to be minimal.

UPDATED POSITION

9. I have read the evidence of Green Seed and submitters relevant to groundwater aspects. No new matters have been raised.

CONCLUSION

10. I consider the groundwater information provided to support PC7 satisfactorily demonstrates that the land is suitable for residential / urban development.
11. Sufficient groundwater level monitoring has been undertaken to adequately identify the potential risks of a high groundwater table for land development.
12. Groundwater considerations for the proposed land development have been satisfactorily documented, and are expected to be able to be managed through design of respective components (e.g. stormwater, pavements, building settlement).

Remalia Elizabeth Pearl Sharplin

27 October 2021