BEFORE THE CENTRAL HAWKE'S BAY DISTRICT COUNCIL
INDEPENDENT HEARINGS COMMISSIONER

UNDER	The Resource Management Act 1991
AND	
IN THE MATTER OF	A NOTIFIED RESOURCE CONSENT APPLICATION FOR SUBDIVISION TO CREATE 11 LOTS (8 RURAL LIFESYLE LOTS, 2 BALANCE LOTS, AND A LOT TO BE AMALGAMATED AS A BOUNDARY ADJUSTMENT) AT MANGAKURI ROAD (RM230016)
BETWEEN	**SR & BJ WILLIAMS CHARITABLE TRUST BOARD** Applicant
AND	24 Submitters
	Central Hawke's Bay District Council Consent Authority
AND	

SUMMARY OF EVIDENCE BY FREDERICK JOSEPH WENTZ

INTRODUCTION AND QUALIFICATIONS

1 My full name is Frederick Joseph Wentz and I reside in Napier and my qualifications, experience and agreement to abide by the Code of Conduct for Expert Witnesses is as set out in paragraphs 2 through 18 of my Statement of Evidence ("SOE").

2 My summary statement covers the following matters:

a) A summary of the key points from my peer review of RDCL's geotechnical assessment completed in 2023.

b) My comments to the geotechnical-related issues raised in the submission from Michael Smith.

c) Conclusions

SUMMARY OF MY PEER REVIEW OF RDCL'S GEOTECHNICAL ASSESSMENT

3 I was engaged by the SR &BJ Williams Charitable Trust to review the geotechnical work undertaken by Resource Development Consultants Limited (RDCL) in 2023 to provide an opinion on whether the geotechnical and geological hazards at development site had been adequately addressed, and if any further assessment was needed (in the context of obtaining Resource Consent).

4 My review included:

a) A site walkover with Lawrence Yule to gain an understanding of proposed development and the known and potential slope stability issues that had been identified to date.

b) A detailed comparison of aerial photographs of the site dating back to 1952 to assess whether the slopes in the site area had changed over time – including whether new areas of instability developed or existing areas of instability worsened. These included photographs taken in 1952, 1964, 1972, 1976, 2007, 2013, 2022 and 2023.

c) Several meetings with Tom Bunny of RDCL to discuss among other issues, the global stability of the site and the stability of the proposed building platforms. In particular we discussed how the stability assessment should be informed by not only by typical numerical assessment (in other words "slope stability analysis"), but also by observations of the slopes across the 71 years from 1952 to 2023.

5 The review of aerial photograph record combined with the site topography remaining clearly visible in each photograph helped to confirm that the proposed building locations have remained globally stable for at least 70 years. The numerical stability analysis was then used to confirm that the local stability of the constructed building pads would be sufficient.

COMMENTS TO THE GEOTECHNICAL-RELATED ISSUES RAISED IN THE SUBMISSION FROM MICHAEL SMITH

6 Mr Smith infers that the design team engineers have used "best practice" solutions to mitigate identified issues. The term "best practice" has not been used in either the RDCL geotechnical assessment or my peer review – it was a term used by the Council's geotechnical peer reviewer Lee Paterson.

In any case, "best practice" is not the threshold that the geotechnical assessment is measured against. In my opinion, the term "Good practice" would be a more accurate description of the geotechnical work that was undertaken, and this "level of practice" is normal and appropriate for this type of project.

7 Mr Smith's comments #9 and 10: These appear to suggest that our "design point" is return period of 100 years (an annual probability of exceedance of 0.01) – and that this is considered a "worst-case" scenario.

In order to satisfy the NZ Building Code and Building Act, the geotechnical assessment has to consider a 500-year return period event (annual probability of exceedance of 0.002) and that has been done.

8 Mr Smith's comments 11-14 re a lack of environmental data to adequately inform our assessment: Within a geotechnical context, we actually have quite a lot of data to consider. Over the period from 1952 (for which we have aerial

photos of the site as mentioned previously) the site appears to have been well tested by at least two significant (> 250-year return period) rainfall events in addition to cyclone Gabrielle. In particular the April 2011 "Hawke's Bay Rain Bomb" which resulted in the evacuation of eight people from "Mangakuri"[1] (not clear if this was from the beach settlement or nearby).

A comparison of the proposed building platform locations from the 1952 through 2023 shows that the site has remained largely unchanged. It is my opinion that having this storm event data combined with being able observe the overall site performance across an approximately 70-year time period was very helpful in the assessment of the potential impact of rainfall on the site slopes – and helps to provide confidence that the building platform and road access areas are generally stable.

9 Mr Smith's comment 15: The recommendation that further work will need to be done in the detailed design phase of the project does is typical – particularly as part of resource consent where the primary objective of the geotechnical engineering assessment is to identify any natural hazards and where necessary, to confirm that appropriate mitigation of the associated risk is achievable. Full design of such mitigations (and other elements of the project) is then typically done as part of detailed design.

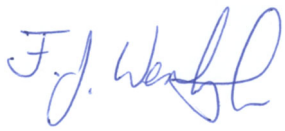
10 Mr Smith's comment 19: In any analysis, the calculated factor of safety will fall below recommended / required minimums if the strength parameters used are low enough. The parameters used in the slope stability assessment are based on site-specific information and typical published values. They contain some conservatism to account for the inherent uncertainty associated with determining soil strength. It is noted that that while most of the building platforms had minimum acceptable factors of safety, some did not, and the levels of those platforms were lowered to found them in deeper, stronger materials; hence increasing their factors of safety to achieve the required minimum values.

[1]Weatherwatch, https://www.weatherwatch.co.nz/content/evacuations-continue-in-hawkes-bay

11 Mr Smith's comment 21: The geotechnical assessment did not conclude that there are no risks, or that all risks have been completely controlled – nor was that the objective. The assessment did conclude that the proposed development would not have a detrimental effect on or exacerbate or create additional risk to the adjacent land, and that the stability of the proposed building platforms would satisfy the requirements of the Building Act and Building Code.

CONCLUSIONS

12 Based on my review of RDCL's assessment, the natural hazards present at the site have been reasonably identified and that the engineering controls that have been recommended (and keeping to the recommended building platform locations) will avoid or mitigate the identified risks to a level appropriate for Resource Consent.



Frederick J. Wentz

25 June 2024