

1 May 2018

Rachelle McBeth
Senior Environmental Planner - Consents
New Plymouth District Council
Private Bag 2025
New Plymouth 4342

Dear Rachelle

**SH3 Mt Messenger Bypass
Response to Applicant's Responses to S92 Information Requests**

I have read the Applicant's responses dated 6 April 2018 to the S92 matters you raised. The following are my responses to the applicant's response to the "Geotechnical" section and "Questions 11a and 11c".

The numbers below correlate to the numbers in the Applicant's responses.

- 11a and 11c With regard to the large landslide, I am awaiting additional information from the applicant and my planned site visit w/e 11 May so I can assess if significant ground improvement is required, as stated by the applicant.
27. I have reviewed the final report from GNS and I concur with the response.
28. The response includes the results of in situ stress measurements which indicate the horizontal stress is almost equal to the vertical stress. For depths less than 500m in rocks that have been subjected to limited tectonic activity, the horizontal stress can be significantly higher than the vertical stress. I therefore suggest the applicant gives consideration in detailed design to the possibility of the horizontal stress being the principal stress.
29. The response closes this item.
- 30a The response provides a valid approach to detailed design. I understand boreholes are to be drilled at the locations of the main cuttings to provide details on the bedding and any defects. I suggest that orientation of the core is carried out in a number of these boreholes to confirm the design assumptions regarding dip direction and defects.
- 30b-30g The response closes this item.
- 31a-31d. The response closes this item.
32. The response closes this item.
33. The response provides a valid approach to detailed design. As per 30a, I suggest that orientation of the core is carried out in a number of the proposed boreholes to be located in rock cuttings to confirm the design assumptions regarding dip direction and defects and, as such, the selection of appropriate mitigation measures, if required.
34. The response closes this item.

Yours sincerely

A handwritten signature in black ink, appearing to read 'RA', with a horizontal line underneath and a small mark to the right.

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