4415
30 December 2020

GEOTECH
consulting ltd

Selwyn District Council
PO Box 90
Rolleston

Attention: Rachel Carruthers

Dear Ms Carruthers,

RE: Plan Change 74
Hughes Development Ltd
163 Halkett Rd & 1066 West Coast Road, West Melton
Geotechnical Report Peer Review

Geotech Consulting has been asked to carry out a peer review on the geotechnical reports for the proposed plan change from Inner Plains to Living West Melton of the 20.7 ha in Lots 1 & 2 DP 34902. If subdivided, the area could support about 150 new residential lots. In particular the peer review is to ensure compliance with the MBIE guidelines for the geotechnical assessment of subdivisions. The geotechnical reports are both by Engeo Ltd for Hughes Developments Ltd and titled:

- Geotechnical Investigation, 163 Halkett Road, West Melton, dated 3 July 2017
- Geotechnical Investigation, 1066 West Coast Road, West Melton, dated 20 July 2018

The site is essentially level but with some undulations from old river channels of up to 2m high on the northern end and 0.5 – 1m high on the southern end. The two reports combined include data from 28 hand auger bores which all stopped on the gravel at between about 0.2m and 1.0m, and 27 test pits to between 1.2m and 2.0m. The site is essentially underlain with topsoil over a silty sand to less than 1m depth (typically 0.3 – 0.6m) overlying gravel to many tens of metres depth. Reference is also made to four deep Ecan well logs to the west, north and east sides of the site, which show the gravels extending to the maximum well depth of 78m. The water table is indicated at being at about 21m to 24m depth. A 3m deep pit and a perched water table resulting from a broken water pipe were observed on the east side, to be further investigated and mitigated at subdivision stage.

The liquefaction hazard is assessed as being very low, given the gravel soils and the 20m depth to water table. The site is equivalent Foundation Technical Category TC1. Natural hazards have been considered but the site is unlikely to be subject to any of them. It appears that the majority of the site should fulfill the requirements of “good ground” as defined in NZS3604, at depths below 0.6m, although our interpretation of the test results is that good ground is present at shallower depths for much of the site. Site specific shallow testing will be needed on each house site at building consent stage.

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We agree that there is minimal to no liquefaction potential at the site. The extent of work reported more than complies with the intent of the MBIE Subdivision Guidance for a site subject to plan change, in our opinion, and in fact is sufficient to support land subdivision, given the consistency of the ground conditions identified. The site would be TC1 Technical land classification.

Yours faithfully
Geotech Consulting Limited

Ian McCahon