4415
25 October 2022

GEOTECH
consulting ltd

Selwyn District Council
PO Box 90
Rolleston

Attention: Richard Bigsby,

Dear Ms Hall-Barlow,

RE: Proposed Subdivision RC 225715
Kevler Development Ltd
Springston Rolleston Road, Rolleston
Geotechnical Report Peer Review

Geotech Consulting has been asked to carry out a peer review on the geotechnical report for the proposed 15.9 hectare subdivision of Lot 2 DP 61162 at Springston Rolleston Road into 274 residential lots and associated roading (subdivision plan Survus, 27 Sep 2022). In particular the peer review is to ensure compliance with the MBIE guidelines for the geotechnical assessment of subdivisions.

The geotechnical report, which is specifically to support subdivision, is:

- *Geotechnical Subdivision Investigation Report, Harrow Green Subdivision, Lot 2 DP 61162, Springston Rolleston Road, Rolleston*, dated 14 June 2022, by Wiley Geotechnical Ltd, for Kevler Developments Ltd.

A previous geotechnical desktop study is referred to in the report has also been reviewed:

- *Geotechnical Desktop Report, Lot 2 DP 61162, Springston Rolleston Road, Rolleston*, dated 3 August 2021, by Wiley Geotechnical Ltd, for Kevler Developments Ltd.

A statement of evidence of Raymond Su as prepared the SDC hearings Panel in 2021 have also been forwarded.

The site is essentially level. The report is based on 15 test pits to 1.7m to 2.1m depth with associated scala penetrometer tests from across the site. This is supplemented with four well logs from the Ecan data base, which are all on or close to the site, although clustered around the north corner (Desktop Study). The site is essentially underlain with 0.1 – 0.3m of topsoil over a silty sand layer to between 0.4m and 0.9m depth, which in turn overlies dense sandy gravel. Although the tests on site do not extend far into the gravel the well log shows gravel dominated soils to the extent of the logs (maximum 114m). The water table is indicated at being at about 5.5m depth, based on the Ecan well data.

The liquefaction hazard is assessed as being low, given the gravel soils and the 5-6m depth to water table. The site is equivalent Foundation Technical Category TC1.

Andrew Hurley E-mail ahurley@geotech.co.nz
Nick Traylen E-mail ntraylen@geotech.co.nz
Ian McCahon E-mail mccahon@geotech.co.nz

Geotech Consulting (NZ) Ltd
PO Box 130 122
Christchurch 8141
New Zealand

GEOLOGICAL & ENGINEERING SERVICES

Natural hazards have been considered but the site is unlikely to be subject to any of them, to a level that cannot be easily mitigated and therefore there is no geotechnical grounds to prevent subdivision.

The majority of the site should fulfill the requirements of “good ground” as defined in NZS3604, and thus NZS3604 foundations should be suitable, subject to confirmation at building consent stage. Additional comments on civil and pavement design, earthworks and excavation are included.

Conclusions

The soil profile identified is consistent with that on other blocks of land adjacent to or close to this site. We agree that there is minimal to no liquefaction potential at the site. We agree with the conclusion that the site is equivalent TC1 Technical Land classification.

The extent of work reported complies with the intent of the MBIE Subdivision Guidance for a site subject to subdivision, in our opinion, given the consistency of the ground conditions identified. The report is sufficient for subdivision consent. Site specific shallow testing are recommended on each house site at building consent stage, once subdivision earthworks are complete.

Yours faithfully
Geotech Consulting Limited

Ian McCahon