

SUMMARY STATEMENT

1. My name is **Marie-Claude Hébert**. I am the Senior Geotechnical Engineer in the Engineering Services team of the Building Consenting Unit at Christchurch City Council (the **Council**).
2. I have prepared evidence on behalf of the Council in respect of matters related to the Specific Purpose (Ōtākaro Avon River Corridor) Zone (**SPOARC**) qualifying matter (**QM**) arising from the submissions and further submissions on Plan Change 14 to the Christchurch District Plan.
3. The purpose of my evidence was to assess the geotechnical suitability of the construction of one to three-storey structures at 254-256 Fitzgerald Ave and Harvey Terrace (**the Site**). I also comment on the geotechnical suitability of buildings with four to six storeys at the Site.
4. My assessment was based on the results of the Geotechnical Assessment Report for the Site (prepared by Geotech Consulting Limited, dated 23 February 2023) (**Geotech report**), and on publicly available geotechnical mapping and information from GNS and the Christchurch Liquefaction Information website for the Site – all of which I summarise in my evidence.
5. The Geotech report concludes that the only significant geotechnical hazard on the Site is related to liquefaction, and that the Site can be considered as having TC2/TC3 hybrid classification. As set out in my evidence, I agree with this conclusion and consider that the methodologies used in the Geotech report are robust and in line with good practice.
6. In summary, I conclude that:
 - (a) construction of two storey buildings, and any associated ground improvement, at the Site is unlikely to have any adverse geotechnical impacts on the Site or surrounding sites;
 - (b) construction of buildings with up to three storeys would be feasible at the Site with specifically designed foundations, taking into account the liquefaction hazard and with input from a suitably qualified geotechnical engineer/engineering geologist during the building/consenting stage; and
 - (c) foundation design for buildings with four to six storeys would likely require specifically designed deep ground improvement, which could

have wider implications, including cost and constructability concerns. The scale of the deep ground improvement may have a greater impact on the surrounding area, compared to buildings of three storeys or less.

7. Andrew Hurley, the author of the Geotech report, provided evidence on behalf of the Glenara Family Trust. Mr Hurley agrees with my evidence regarding the SPOARC QM. Mr Hurley considers the Site is acceptable for one to two storey structures and also more significant buildings of between three and six storeys with suitable foundations and/or ground improvement. I agree with Mr Hurley.
8. Expert conferencing was held on 21 September 2023 in respect to Hazards, resulting in the Joint Statement of Hazards Experts. Both Mr Hurley and I attended (among other experts). The Joint Statement confirms that I agree with Mr Hurley's position regarding liquefaction in the SPOARC.

Date: 18 October 2023

Marie-Claude Hébert