

Date: 14 June 2021 Ref: 33313Zlet

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## GEOTECHNICAL LETTER IN RESPONSE PROPOSED NEW HOUSE 266 WHALE BEACH ROAD, WHALE BEACH, NSW

We confirm that we prepared a geotechnical assessment report (Ref: 33313Zrpt) dated 7 July 2020. This report, together with Council Forms 1 and 1a (which we signed) were submitted with the DA for a proposed new house at the above address. GHD have carried out a peer review (Ref: 12552659, dated 28 May 2021) of our report, on behalf of the western neighbour at 264 Whale Beach Road.

The following is our response to issues raised by GHD:

- GHD stated that we did not consider potential impacts on adjoining properties in our risk assessment. This is not correct. The potential landslide hazards considered in our risk assessment included the potential instability of the excavation and the proposed retaining walls, which would clearly impact on the neighbouring properties. Our recommendations to reduce the risks associated with the bulk excavation and the proposed retaining walls will, by implication, reduce potential adverse impacts on the neighbouring properties. Likewise, our recommendation to limit ground vibrations to 5mm/sec will also reduce potential adverse impacts on the neighbouring buildings.
- 2. We acknowledge that we recommended that bulk excavations within the soil profile and extremely weathered rock be battered to no steeper than 1V :1H. However, this recommendation was qualified by the batters being accommodated within the site geometry. Further, as the bulk excavation will be set back 1m from the side boundaries, such batters would only be appropriate for excavations up to 1m deep. This point was covered in our report, and this was acknowledged by GHD (under the heading 'Background and JKG Recommendations in their report). We are not certain as to why GHD highlighted that 1V:1H batters will need to extend at least 6m horizontally for the maximum 6m excavation depth and will undermine the house at No 264. This statement by GHD is alarmist and is neither helpful nor constructive, as such a scenario is not consistent with our recommendations.
- 3. The use of anchors which extend into No 264 is a matter of negotiation between the respective neighbours. Should permission for anchors not be granted, there are alternative retention systems that can be used to support the western excavation face, such as internal propping, provision of temporary internal buttresses, top-down construction, to name a few. We note that our report was





prepared in accordance with the Pittwater Council Risk Management Policy and as such mainly addressed risks associated with slope instability. Our report was not intended to address geotechnical design issues in detail. Such details will be included in the geotechnical investigation report which will be prepared following the drilling of the nominated boreholes and more detailed subsurface information becomes available. Detailed structural design will then be carried out, probably with our input, and only at this stage are various retention systems considered and optimised.

- 4. We note that only permanent anchors installed into No 264 will pose the restrictions to future development or improvement of No 264, as outlined by GHD. Temporary anchors, as intended for use, will pose minimal restrictions as the anchor strands will be destressed on completion of construction at No 266, and can easily be cut if encountered during future development or improvement of No 264 without adverse effects, as is common practise in the industry.
- 5. We re-iterate that our report addressed geotechnical issues, and it is not appropriate to present details of a water discharge system, which is a hydraulic issue. This issue will be addressed at detail design stage by a hydraulic engineer.

We thus stand by our opinion that the proposed development can proceed, as our risk analysis has shown that the proposed development can achieve the 'Acceptable Risk Management' criteria in the Pittwater Risk Management Policy, provided that the recommendations presented in our report are adopted.

Should you require any further information regarding the above, please do not hesitate to contact the undersigned.

Yours faithfully For and on behalf of JK GEOTECHNICS

Agi Zenon Principal Consultant | Geotechnical Engineer