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29 May 2015

Greg Dewe
Land Development Manager
Fulton Hogan Land Development Limited
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Dear Greg

Fulton Hogan Land Development Limited Stage 7 Rosemerryn Subdivision Geotechnical Completion Letter Report – Resource Consent 135618
Our Ref: 224464

This geotechnical completion letter report is submitted in accordance with Section 12.4.1 of the Selwyn District Council Engineering Code of Practise.

1 Introduction

As part of the Fulton Hogan Land Development Limited (FHLD) Rosemerryn Subdivision Development located at Lincoln, Aurecon has completed a geotechnical investigation and assessment for what are now named Stages 3 to 7. This is detailed in the Aurecon geotechnical report "*Geotechnical Assessment Report Rev 3, Rosemerryn Farm Stages 3 to 6, Fulton Hogan Land Development Limited*", dated 3 May 2012. Note, as the project staging numbering have changed since this geotechnical report was prepared, what was formally Stage 6 has now been split into Stages 6 and 7.

The report was issued following the publication of the Ministry of Business Innovation & Employment (MBIE) formerly the Department of Building and Housing, guidelines in November 2011, which define the new Technical Category zoning and the liquefaction induced deformation limits for each Technical Category.

The categories and corresponding criteria are summarised as follows:

- **Technical Category 1 (TC1)** – Future land damage from liquefaction is unlikely, and ground settlements are expected to be within normally accepted tolerances.
- **Technical Category 2 (TC2)** – Minor to moderate land damage from liquefaction is possible in future large earthquakes.
- **Technical Category 3 (TC3)** – Moderate to significant land damage from liquefaction is possible in future large earthquakes.

For the Canterbury region, the MBIE has released a new classification system for residential 'Green Zone' land on the flat in regard to liquefaction susceptibility. These are summarised below:

Table 2: Inferred Technical Category of Lots within Stage 7

Lot	Technical Category (Based on calculated liquefaction deformation limits)	Lot	Technical Category (Based on calculated liquefaction deformation limits)	Lot	Technical Category (Based on calculated liquefaction deformation limits)
120	TC1	132	TC1	243	TC1
121	TC1	133	TC1	244	TC1
122	TC1	134	TC1	245	TC1
123	TC1	238	TC1	246	TC1
124	TC1	239	TC1	247	TC1
125	TC1	240	TC1	248	TC1
126	TC1	241	TC1	249	TC1
127	TC1	242	TC1	250	TC1
128	TC1	243	TC1	251	TC1
129	TC1	244	TC1	252	TC1

Technical Category Classification is not applicable for the lots vested as reserve and roading areas. However, these lots all have geotechnical characteristics consistent with a TC1 classification.

A TC1 Classification effectively means that the MBIE believe that ‘*Future land damage from liquefaction is unlikely, and ground settlements are expected to be with normally accepted tolerances.*’ Standard type foundations (e.g. NZS3604, NZS4229 etc.) are acceptable subject to site specific shallow geotechnical investigation.

3 Limitations

The contents of this letter are for the sole use of the Client and no responsibility or liability will be accepted to any third party. Information or opinions contained within this letter may not be used in other contexts or for any other purposes without our prior agreement. The comments in this letter are based on our investigations of the site for the sole purposes of the geotechnical aspects only, as requested by the Client. Only a finite amount of information has been collected and this letter does not purport to completely describe all the site characteristics and properties. The extent of our investigations and the results of all the tests carried out are as described in the geotechnical report for Stages 3 to 6 “*Geotechnical Assessment Report Revision 3, Rosemerryn Farm Stages 3 to 6, Fulton Hogan Land Development Limited*”, dated 3 May 2012.

We trust this meets your requirements and if there are any further queries please do not hesitate to contact us.

Yours sincerely



Dr Jan Kupec
Technical Director - Ground Engineering
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Enc: SDC Approved Subdivision Plan for Rosemerryn Subdivision