

IN THE MATTER OF the Resource
 Management Act 1991

AND

IN THE MATTER OF a private plan change
 request ('Proposed
 (Private) Plan Change
 40: Wallaceville') to
 the Upper Hutt City
 District Plan made by
 Wallaceville
 Developments Limited.

STATEMENT OF EVIDENCE OF KAREN ELIZABETH JONES

1.0 EXECUTIVE SUMMARY

- 1.1 My name is Karen Elizabeth Jones and I hold a Bachelor of Science (Hons) degree in Geology from the University of Wales, Cardiff, UK.
- 1.2 I have twelve years' experience in providing professional engineering geology and environmental consultancy services to a broad range of private and public Clients across the UK and New Zealand.
- 1.3 The ENGEO geotechnical assessment report was prepared by myself and reviewed by Guy Cassidy in December 2014 and describes the outcome of a visual site walkover and technical literature review.
- 1.4 Based on published information, the local geology does not appear to pose any significant challenges to the construction of residential and commercial buildings.
- 1.5 Given the geological setting, there is a low risk of liquefaction or lateral spreading at this site.
- 1.6 Development of the land to the south of Alexander Road is likely to be possible after technical consideration of the specific foundation ground conditions, rockfall risk and debris flow risk. Suitable remedial measures will be specified prior to Subdivision Consent application.
- 1.7 I am satisfied that on geotechnical and geological grounds the land in the plan change proposal is suitable for residential and commercial development.

2.0 INTRODUCTION

- 2.1 My name is Karen Elizabeth Jones. I hold a Bachelor of Science (Hons) degree in Geology from the University of Wales, Cardiff, UK. I am a Fellow of the Geological Society, London, England; a Member of WasteMINZ; and a Member of the New Zealand Geotechnical Society and a Senior Environmental Geologist with ENGEO (NZ) Limited.
- 2.2 I appear in relation to a private plan change request ('Proposed (Private) Plan Change 40: Wallaceville') to the Upper Hutt City District Plan made by Wallaceville Developments Limited (WDL) to rezone approximately 63 hectares of former Wallaceville Ag-Research site and a small part of the Trentham Racecourse property for residential and commercial uses.
- 2.3 I have twelve years' experience in providing professional engineering geology and environmental consultancy services to a broad range of private and public Clients across UK and New Zealand. My project experience includes work in the land development, buildings, transportation and renewable energy sectors.
- 2.4 My involvement in the Wallaceville subdivision development project commenced in July 2014 when ENGEO was engaged by WDL to complete a desktop assessment for the proposed subdivision. Our engagement included a site walkover which was completed by myself, a Senior Engineering Geologist in the Wellington Office, with oversight and technical review by Guy Cassidy, the Team Leader and Principal Engineering Geologist.
- 2.5 I am familiar with the subject site and its surrounds. I have personally visited the site several times commencing July 2014.
- 2.6 Although this is a Council hearing I note that I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note (2014) and agree to comply with the Code. Except where I state that I am relying upon the specified evidence of another person, my evidence in this statement is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions which I express.

3.0 SCOPE OF EVIDENCE

- 3.1 In my evidence I propose to:
- a) Describe my technical report submitted with the Plan Change Request and further information I have prepared post-lodgement;
 - b) Summarise and comment on the submissions received on the application that are relevant to my area of expertise;
 - c) Provide comments on the recommendation of the Officer's Section 42A Report related to my area of expertise; and
 - d) Provide my recommendation on the Plan Change Request.

4.0 SUMMARY OF TECHNICAL REPORT

- 4.1 The ENGEO geotechnical assessment report (Reference 11307.000.000/004/02) was prepared by myself and reviewed by Guy Cassidy in December 2014 and describes the outcome of a visual site walkover and technical literature review.
- 4.2 Based on published information, the site geology comprises a thin veneer of fill over some thickness of alluvial silt over a considerable depth of dense alluvial gravels and is typical of the Upper Hutt Region. We understand that the water table is around 10m depth. This geology does not appear to pose any significant challenges to the construction of residential and commercial buildings.
- 4.3 Given the geological setting, there is a low risk of liquefaction or lateral spreading at this site.
- 4.4 The site topography is relatively flat for the most part. The smaller triangular area located to the southeast of Alexander Road is located at the foot of a ridge system with associated finger gullies running down into the main Hutt valley.
- 4.5 I believe that there may be some risk of rockfall or debris flow events impacting dwellings if constructed at the base of the slope, however, this risk will need to be quantified by technical analysis using a complete site topographical survey as a background file.
- 4.6 If any rockfall or debris flow risks are present I would consider that an earth bund and catch ditch type arrangement would be suitable to catch falling material and to channel debris laden water around the developed site. Such a solution would have very little visual impact as it can be planted with selected vegetation as a 'green solution'.
- 4.7 It may be possible that the depth to good ground for new building foundations is greater within the fan deposits located immediately beneath the hillside south of Alexander Road, however, appropriate geotechnical investigation and design will be completed and recommendations made prior to Subdivision Consent application.

5.0 RESPONSE TO MATTERS RAISED BY SUBMITTERS

5.1 Section S5.9 (Land South of Alexander Road).

The geotechnical aspect of this area is answered in more detail in Section 4.5 and 4.6 of my evidence above. The risk of specific rockfall and debris flow will be analysed prior to Subdivision Consent and any remedial measures, such as a rockfall earth bund and/or catch ditch, will be appropriately designed at this time.

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 I am satisfied that on geotechnical and geological grounds the land in the plan change proposal is suitable for residential and commercial development.

6.2 I am of this opinion for the following reasons:

- The geology of the area does not pose significant challenges to development or the construction of residential and commercial buildings;
- There is a low risk of liquefaction and lateral spreading at the site;
- Development of the land to the south of Alexander Road will be possible after technical consideration of the foundation ground conditions, rockfall risk and debris flow risk. Suitable remedial measures will be specified prior to Subdivision Consent application.

DATE 2 July 2015

NAME Karen Jones

POSITION Senior Engineering Geologist

SIGNED 
