RMA FORM 5

Submission on publicly notified proposed district plan



Clause 6 of Schedule 1, Resource Management Act 1991

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If your submission does not include your name and an email or postal address for service, it will be rejected.

While the Council will retain all information provided in your submission in secure council systems, all contact details will be removed from any documents published on Council's website once the district plan process is complete. However, your name and the contents of your submission will still appear in these documents.

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To: Chief Executive, Hutt City Council

This is a submission from:

Full name COR Company/organisation	BARRY GOOFREY
Company/organisation	
Contact person if different	AS ABOVE
Email address the Council, hearing panel, and courts will use this to contact you, and will publish-lhis information so other submitters can contact you if necessary	info@coffeefreshleasing.com
Postal address Required if you did not provide an email address, otherwise optional Phone	29 WALTERS ST, AVALON LOWER HUTT 5011
optional	

4.	ı	could	could not gain an advantage in trade competition through this submission
		(Please tick one)	<u> </u>

This is a submission on the Proposed Lower Hutt District Plan 2025.

5.	If you	u could gain	an ac	vantage in trade competition through this submission:	
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		(b) does r	not rel	ate to trade competition or the effects of trade competition:	
(you must tick one if you answered "could" to the question in paragraph 3 above)					
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Where to send your submission

- By email (preferred): district.plan@huttcity.govt.nz
- By post: Hutt City Council, Private Bag 31912, Lower Hutt 5040
- In person: At the Hutt City Council Customer Service Centre, 30 Laings Road, Lower Hutt



Geological Engineering Assessment Proposed Subdivision of Lot 14, DP 346076. 7 Winifred Way, Belmont, Lower Hutt

12 August 2020



7 Winifred Way Geological Engineering Assessment

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Quality assurance statement

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Report Status: Final to client



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1.0 Introduction

1.1 General

In August 2020 NZET Ltd was commissioned by the property owner Barry Godfrey to complete a geological site assessment in support of a proposed development at 7 Winifred Way, Belmont, Lower Hutt.

The proposal is to subdivide the property into two Lots with the intention of constructing a residential dwelling on each new Lot. The proposed development will require minor earthworks to construct build platforms and accessway to the Lots. This report has been produced to provide professional opinion of the lands' suitability for the proposed development and to support a resource consent application only and is not intended to be used for the purposes of detailed foundation and earthworks design.

1.2 Objectives

The objectives of the assessment are as follows:

- Assess land stability of existing sloping ground;
- Provide an assessment and recommendations for earthworks in relation to stability and any retaining requirements;
- Provide general recommendations for foundation design.

This report has been prepared following a desktop study of the area, a site walkover, Scala Penetrometer tests, slope analysis and review of geological, topographical and seismic mapping.

This report has been prepared to provide an overall assessment of the lands' suitability to support the proposed residential development.

1.3 Report layout

Section 2 of this report provides details of the existing available information (Desk Study), such as site geology and site history.

Section 3 details the walk over survey and limited intrusive investigations.

Section 4 discusses the findings from the above desk study, walkover survey and intrusive works.

Section 5 provides recommendations for the detailed design stage of the proposed development.

1.4 Limitations

Subsoils are inherently variable and by their very nature are hidden from view such that no investigation can be exhaustive to the extent that all soil conditions are revealed. Conditions may therefore be present beneath the site that were not apparent from the data available for review.

Similarly, this assessment has been based on limited third-party data acquired from various sources. This data has been taken at face value and has not been subjected to any third-party validation. It is essential that this office be contacted if there is any variation in subsoil conditions from those described in this report as it may affect the design parameters recommended.



2.0 Existing information (desk study)

2.1 Site description

The proposed development is located off Winifred Way in the suburb of Belmont. A site location plan is included as Figure 1. The surrounding properties are all residential blocks.

The site is sloping from north-west down to the south-east at a 14% to 18% slope (~8 to 10 degrees from horizontal). The property is currently vegetated with gorse and grass. There is a minor existing levelled platform at the top of the site near the boundary with Winifred Way.

2.2 Geology and Seismicity

The underlying geology of the area as shown on the 1:250,000 GNS Geological Webmap indicates the site to be underlain with Rakaia terrane mudstone-sandstone sequences and poorly bedded sandstone also depicted as Greywacke bedrock.

This geological map also indicates the active Wellington Fault to be located ~800m east of the property. Based on the relative proximity, predicted recurrence intervals and expected energy release (magnitude 7.5), a qualitative consideration of fault risks indicates that the development on the site should be permitted from a seismic perspective.

The site, as indicated on the Greater Wellington GIS hazards map, has a moderate combined earthquake hazard with low to moderate slope failure potential and low ground shaking expectancy. The site is not susceptible to liquefaction.

3.0 Site Investigations

3.1 General

The preliminary site investigation included the following works on the 6th of August 2020.

- A site walkover and assessment
- Scala Penetrometer soundings
- Slope Analysis

The preliminary investigation was undertaken to assess the current stability of the site and gather information on the subsoil materials in relation to the future stability of the site and its ability to support the proposed development.

3.2 Site walkover

The site walkover was undertaken to assess the surroundings of the site and determine the extent of the proposed development. None of the site area, or surrounding slopes, showed any signs of failure. Based on a review of historic aerial photographs, the site slopes appear to have been in their current condition for many years.



3.3 Intrusive works

During the initial site visit, Scala penetration soundings were undertaken to provide some preliminary information on the ground conditions and depth to rock. The findings are summarised below.

3.3.1 Subsoils

Ground water was not encountered during any site testing. Typically, the tests encountered topsoil over clayey silts/residual soils over rock, likely moderately weathered greywacke, at varying depths. The ground was typically stiff below 300mm BGL and very stiff below 1000mm BGL.

4.0 Design Considerations

4.1 General

From preliminary observations, the site is considered to generally have a low risk from geotechnical hazards. The following sections provide more detailed information on specific hazards to the sites.

4.3 Liquefaction and Lateral Spreading Hazards

The site is considered medium risk from ground amplification and not be susceptible to liquefaction or liquefaction induced lateral spreading due to the following:

- The site soils are not prone to saturation
- Soils are well compacted.
- Groundwater was not encountered during the site investigation.

4.5 Foundations

From the limited preliminary investigation, the existing ground conditions will satisfy the design criteria for foundations suitable for development which are based on an ultimate bearing capacity of 300 kPa (consistent with Section 3 of NZS 3604:2011 - Code of Practice for Light Timber Frame Buildings Not Requiring Specific Design) as well as rib-raft type slab foundations, however, due to the slope of the site, the possibility of site levelling and proposed cuts required to accommodate the buildings, before building takes place a specific assessment as per NZS 3604:2011 and MBIE Module 2 should be undertaken to confirm specific foundation and retaining design requirements.

4.6 Earthworks

Minor excavations will be required to accommodate the proposed development along with possible retaining of cut batters. Detailed design of these will be required before any works commence.

Weaker topsoil will need to be stripped from the proposed construction areas to depths of ~ 300mm.

All cut batter slopes should be no steeper than 1V to 1.5H without SED retaining. Steeper batters may be suitable with specific engineering assessment and design.



5.0 Conclusions and Recommendations

5.1 Conclusions

The soils beneath the site are clayey silts overlying rock. Soils below 300mm are stiff, and below 1000mm very stiff.

The site is considered suitable for the proposed development. Foundation design should be completed as detailed in section 3.3 of NZS3604:2011 once any earthworks have been completed and the proposed building footprint defined.

5.2 Recommendations

Buildings

Before building takes place, confirmation of acceptable ground conditions should be undertaken and foundation design should be completed as detailed in section 3.3 of NZS 3604:2011.

Earthworks

Any earthworks should be carried out in line with NZS 4431: 1989, 'Earth Fill for Residential Purposes'

Silt and erosion should be controlled in accordance with Wellington Regional Council, 'Erosion and Sediment Control Guidelines for the Wellington Region', September 2002.

It is recommended that an earthworks management plan, including required monitoring and supervision, is put in place prior to the commencement of works.

Specific consideration should be taken during the entire development phase to prevent any dust, soil, water or debris entering properties below the site.



Figures



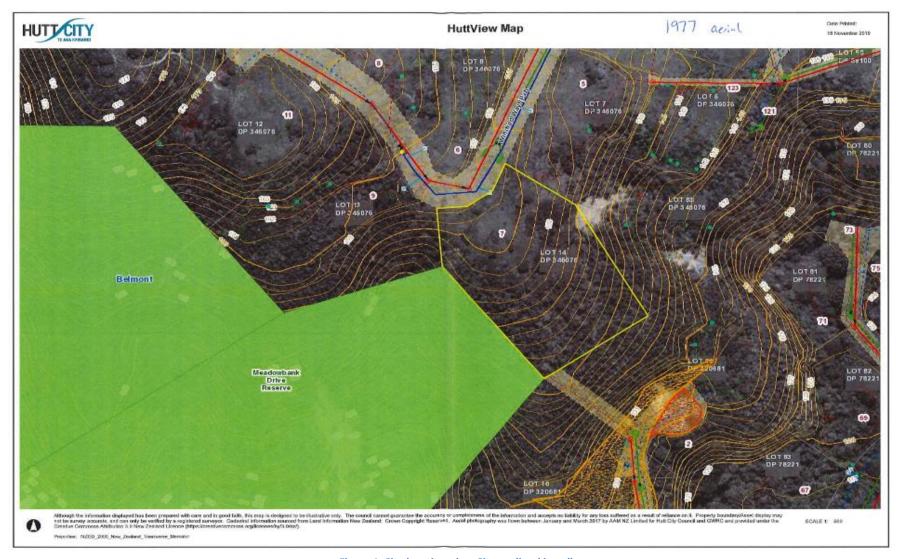


Figure 1: Site location plan. Site outlined in yellow.



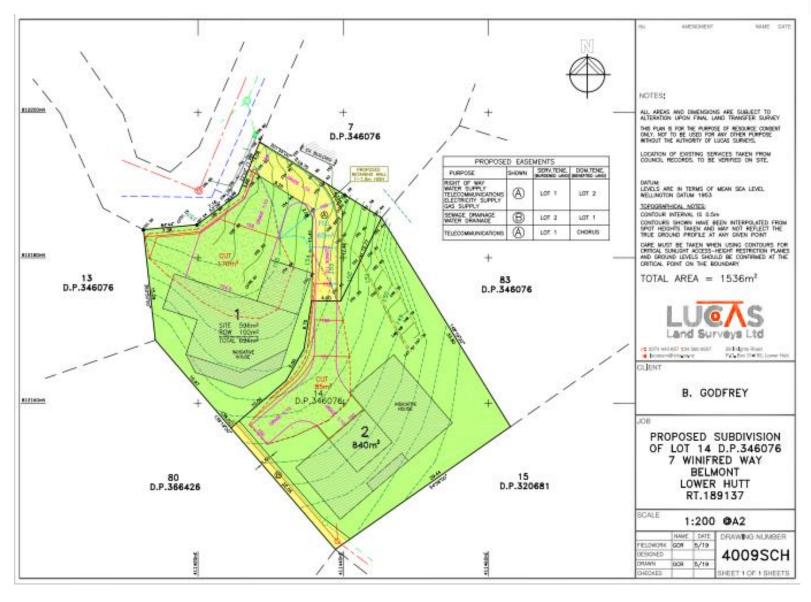


Figure 2: Proposed development plan



Appendices



Appendix A- Penetrometer Test Results



