

Technical Memo re Natural Hazards

Costco Christchurch, Fast-track Approvals Act 2024

From: Eliot Sinclair & Partners Limited

Project number: 610721

To: Abdul Deeb, Real Estate Director,
Costco Wholesale New Zealand
Ltd

Date: 19 August 2026

Purpose

This technical memorandum is in relation to natural hazards at the proposed Costco Christchurch site. The memo is a summary of existing natural hazards assessment work.

The memo is intended to be used as technical supporting documentation for a referral application under the Fast-track Approvals Act 2024 (FTAA) for the Project.

For full details of the natural hazards context refer to the 2022 Natural Hazards Risk Assessment completed by Eliot Sinclair & Partners Ltd (Project ref. 501827) in Appendix 1 of this report.

The 2022 report was for a previous site development proposal though is directly relevant to the current 2026 Costco proposal. The existing natural hazards reporting applies to the entire Costco project site area.

The Project

The project involves the establishment of a new Costco retail store, additional retail activities and site establishment works at 475 Memorial Avenue, 500 and 520 Avonhead Road, and 400 Russey Road in Avonhead, Christchurch. Refer to site area in Figure 1.

Previous work & existing documents

Over a period of several years the site has been subject to iterations of assessment to characterise two forms of hazard: geotechnical (natural) hazards and soil contamination. We have produced a separate companion memo covering soil contamination.

Geotechnical (natural) hazards have been characterised via reporting from Aurecon (2014), Riley (2016) and Eliot Sinclair & Partners Ltd (2021¹ & 2022²). The 2021 Geotechnical Report is included as **Attachment 9** of the Referral Report.

Eliot Sinclair's 2022 reporting addresses the risk of natural hazards specifically in terms of section 106 of the Resource Management Act (RMA), 1991. The 2022 report was used as technical supporting documentation for an application to Christchurch City Council (CCC) for subdivision consent.

CCC consent RMA/2022/1411 addressing subdivision, land use and NES³ was granted on 15 November 2023, and supported by an Independent Hearing Commissioner's report (30 October 2023).

¹ Eliot Sinclair (2021) Geotechnical Report; Ref. 501827, October 2021.

² Eliot Sinclair (2022) Natural Hazards Risk Assessment; Ref. 501827, April 2022

³ National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES)

2022 Key findings

Our 2022 natural hazards reporting found that the site and the proposed development are typical of the wider area and environs.

The site is not without typical Christchurch land development hazards, though we found no unusual hazards or special site conditions to be addressed. In 2022 we concluded that the site is suitable for the proposed commercial subdivision, and which was consented in 2023.

We provided a Statement of Professional Opinion on the suitability of land subdivision (dated 22 April 2022).

Changes to regulations

Since our 2022 natural hazards reporting there have been changes to regulations regarding natural hazards reporting, notably (i) the addition of s106A regarding natural hazards and land use consents, and (ii) the introduction of the National Policy Statement for Natural Hazards 2025 (NPS-NH), which came into force on 15 January 2026.

We note that since 2022 there are no changes to the site's physical hazard environment, though application for a consent variation or a new consent to address the Costco proposal will require natural hazards reporting in the manner to address the updated regulations. This is more of an administrative regulatory requirement, not a requirement related to changed or more adverse site risk exposure.

Conclusions

For the purposes of this memo, the current Costco site development proposal is practically equivalent to the existing consented development proposal re RMA/2022/1411.

The site is not without typical Christchurch land development hazards, though there are no unusual hazards or special site conditions to be addressed.

Natural hazards risk management will run through the normal course of subdivision design, consenting & construction monitoring, as well as the specific investigation and detailed engineering of structures under the NZ Building Code and building consent provisions.

With respect to Section 106(1)(c), we are satisfied that sufficient provision has been made for legal and physical access to each allotment.

The site is suitable for the proposed Costco development.

Enc. Figures 1 & 2

Appendix 1: Eliot Sinclair (2022) Natural Hazards Risk Assessment; Ref. 501827, April 2022

Figures



Figure 1. Costco site area – the same area addressed in the 2022 natural hazards reporting

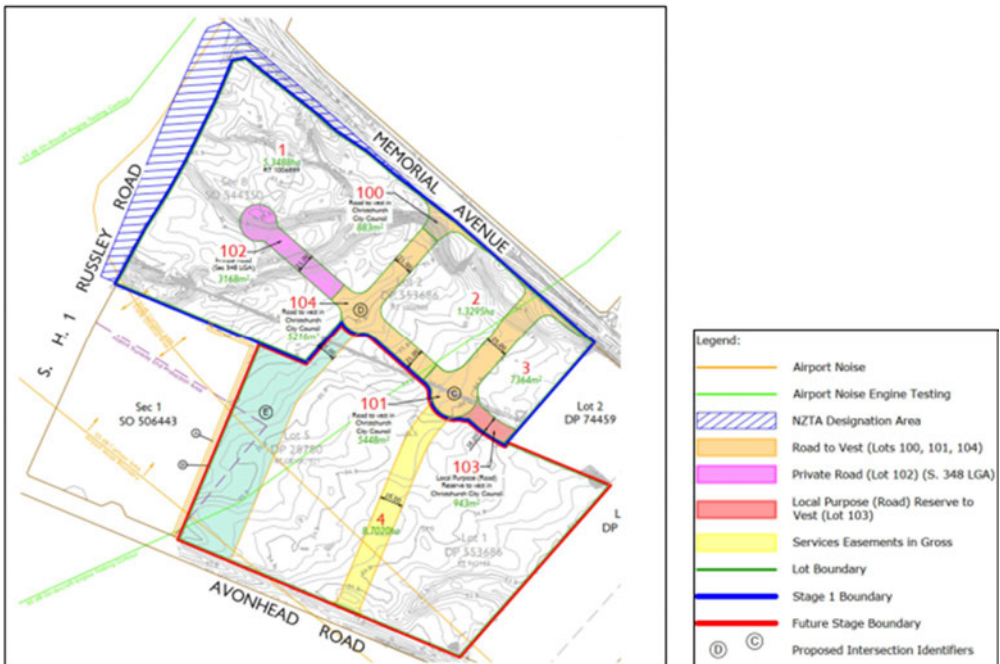
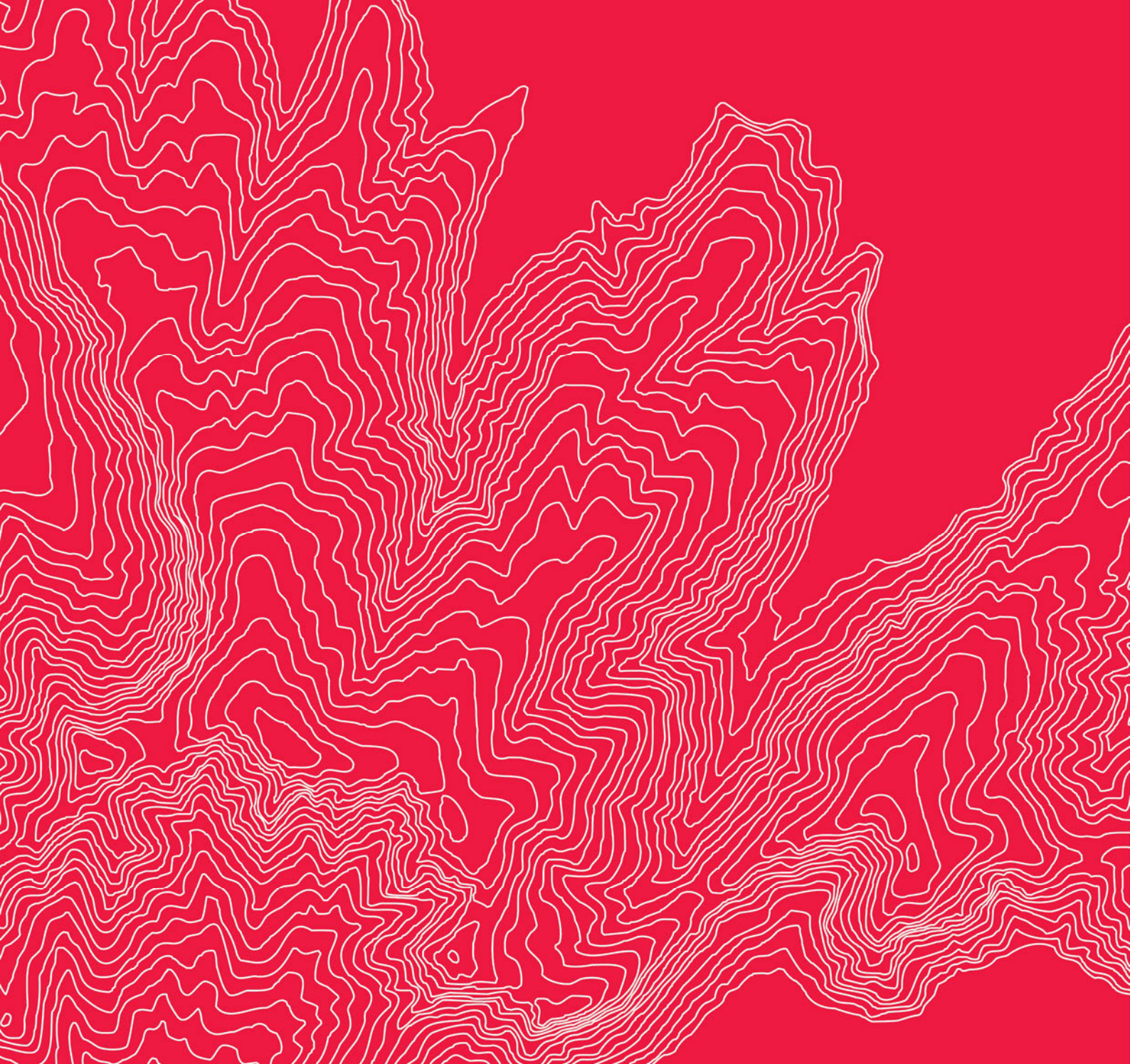


Figure 2. RMA/2022/1411 Scheme plan. The granted consent covers the outlined blue area.

Appendix 1

Eliot Sinclair (2022) Natural Hazards Risk Assessment; Ref. 501827, April 2022



Natural Hazards Risk Assessment

**400 Russley Road, 475 Memorial Ave
and 500 & 520 Avonhead Road**

Prepared for Miles Premises Limited
501827

**eliot
sinclair**

Natural Hazards Risk Assessment

400 Russley Road, 475 Memorial Ave and 500 & 520 Avonhead Road

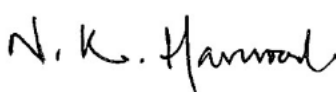
Prepared for Miles Premises Limited

501827

Quality Control Certificate

Eliot Sinclair & Partners Limited

eliotsinclair.co.nz

Action	Name	Signature	Date
Prepared by:	Peter Ngenang Geotechnical Engineering Technician NZDE Civil MEngNZ s 9(2)(a)		14 April 2022
Reviewed by:	Nick Harwood Geotechnical Engineer Principal BE(Hons) MSc DIC MInstD CMEngNZ CPEng s 9(2)(a)		22 April 2022
Directed and approved for release by:	Warren Haynes Surveyor Director BSurv FS+SNZ RPSurv LCS		22 April 2022
Status:	Final		
Release date:	22 April 2022		
Reference no:	501827		
Distributed to:	Miles Premises Limited		

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Appendix A. Application for Subdivision Consent Plan

Appendix B. ESP Natural Hazard Summary Table

Appendix C. Statement of Professional Opinion

1. Introduction

Eliot Sinclair & Partners Ltd was engaged by Miles Premises Limited to assess the risk of natural hazards affecting the land at 400 Russley Road, 475 Memorial Avenue and 500 & 520 Avonhead Road, Burnside ('the site').

This report addresses the risk of natural hazards as they relate to the proposed commercial subdivision in terms of section 106 of the Resource Management Act (RMA), 1991.

The report is intended to be used as technical supporting documentation for an application for subdivision consent.

2. Reporting Requirements

The scope of the report is governed by the need to address the relevant requirements of the following documents:

- Resource Management Act, 1991; Section 106 – Natural Hazards¹
- Ministry of Business, Innovation and Employment (MBIE), 2012: Repairing and Rebuilding Houses Affected by the Canterbury Earthquakes – Part D: Subdivisions²
- EQC / MBIE / Ministry for the Environment (MfE), 2017: Planning and Engineering Guidance for Potentially Liquefaction Prone Land³
- MfE, 2017: New matters to consider for resource consents and designations - Fact Sheet 10 re natural hazards⁴
- Christchurch City Council District Plan – Chapter 5: Natural Hazards⁵
- CCC Bulletin 23.2 Geotechnical Assessment to Satisfy Section 106 Matters (May 2013)
- CCC Infrastructure Design Standard (IDS) / Part 4 Geotechnical Requirements (Jan 2013)

The MfE Fact Sheet 10 summarises the range of natural hazards to be considered as follows:

Any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.

¹ NZ Legislation - <https://www.legislation.govt.nz/act/public/1991/0069/latest/DLM234389.html>

² MBIE - <https://www.building.govt.nz/building-code-compliance/canterbury-rebuild/repairing-and-rebuilding-houses-affected-by-the-canterbury-earthquakes/>

³ EQC / MBIE / MfE - <https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/planning-engineering-liquefaction-land/>

⁴ MfE - <https://www.mfe.govt.nz/publications/rma/resource-legislation-amendments-2017-fact-sheet-series>

⁵ CCC - <https://districtplan.ccc.govt.nz/pages/plan/book.aspx?exhibit=DistrictPlan>

3. Scope of Work

The scope of work for this assessment comprised:

- Review available data from the New Zealand Geotechnical Database⁶ (NZGD), Canterbury Maps⁷ and the Institute of Geological & Nuclear Sciences' (GNS) Active Faults Database⁸,
- Walkover inspections (June 2018, September 2021 & February 2022).
- Review of Eliot Sinclair's geotechnical investigation and reporting⁹
- Review of Eliot Sinclair's Infrastructure Design Report¹⁰
- Review geotechnical investigation and reporting by others^{11,12}
- Assess the risk of material damage from potential natural hazards.
- Prepare a Natural Hazards Risk Assessment report to comment on the hazards relevant to Section 106 of the Resource Management Act 1991.

We have also undertaken a Preliminary and Detailed Site Investigation (PSI/DSI) report¹³ to assess potential contaminating land activities across the site.

4. Subdivision Proposal

It is proposed a boundary adjustment and subdivision of the site at 475 Memorial Avenue, 500 and 520 Avonhead Road, and 400 Russley Road.

Refer to Appendix A for the Application for Subdivision Consent plan.

⁶ <https://www.nzgd.org.nz/>

⁷ <https://mapviewer.canterburymaps.govt.nz/>

⁸ <https://data.gns.cri.nz/af/>

⁹ Geotechnical Investigation and Report for Miles Remises – Memorial Avenue, prepared for Miles Premises Limited by Eliot Sinclair, reference 501827 dated 18 October 2021

¹⁰ Infrastructure Design Report – Memorial Ave, prepared for Miles Premises Limited by Eliot Sinclair, reference 501827 dated April 2022.

¹¹ Geotechnical assessment 400-447 Memorial Avenue, Burnside. Prepared by Riley Consultants Ltd dated 13 April 2016

¹² Geotechnical Report, Corner of Memorial Avenue and Russley Road prepared for Memorial Avenue Investments Limited by Aurecon, reference 221228 dated 4 August 2014, Rev 4

¹³ 2022 Preliminary and Detailed Site Investigation at 400 Russley Rd, 475 Memorial Ave and 500 & 520 Avonhead Road prepared by Eliot Sinclair, Reference 501827

5. Site Description

The site is located in the Christchurch suburb of Burnside near the intersection of Memorial Avenue and SH1 Russley Road; refer to Figure 1. The site is an area of rural undeveloped land on the fringe of the urbanised area of Christchurch. The land is low-lying and gently undulating with evidence of former watercourses across parts of the site, typical of the natural lay of the land in the area.

The legal parcels at the site are:

- 400 Russley Road (Sec 8 SO544350)
- 475 Memorial Ave (Lot 2 DP 553686)
- 500 Avonhead Road (Lot 1 DP 553686)
- 520 Avonhead Road (Lot 5 DP 28780)



Figure 1. Location map of the site. Base map sourced from Canterbury Maps

6. Natural Hazards Risk Assessment

6.1. Assessment Context

Councils can refuse subdivision consent if there is a significant risk from natural hazards. To determine whether there is a significant risk from natural hazards, decision-makers are guided by the matters set out in RMA Section 106(1A). This includes a combined assessment of:

- The likelihood of natural hazards occurring (whether individual or in combination)
- The material damage that would result from natural hazards to land where the consent is sought, other land, or structures
- Any likely subsequent use of the land where the consent is sought that would accelerate, worsen, or result in material damage of the kind referred to in the previous point.

Decision-makers are required to consider the magnitude of risk of natural hazards, including natural hazards that have a high impact but low probability of occurrence. This will align assessments with the definition of 'effect' in Section 3 of the RMA, which includes any potential effect of low probability with a high potential impact.

6.2. Site-specific risk assessment

Our Natural Hazard Risk Assessment Summary Table (Appendix B) presents the risk assessment of the relevant natural hazards at the site. The table sets out each individual natural hazard and considers the likelihood and consequences of the hazard at the existing site and assesses the residual risk when the site is developed. The assessment gives a picture of the risk of material damage and whether or not a natural hazard would be exacerbated by the development.

We have also undertaken a Preliminary and Detailed Site Investigation (PSI/DSI) report¹³ to assess potential contaminating land activities across the site.

7. Recommendations

Stormwater management, earthworks and foundation engineering will be addressed through normal, good practice engineering design risk management and consenting processes, which would run through the normal course of subdivision design, consenting & construction, as well as the specific investigation and detailed engineering of structures under the NZ Building Code and building consent provisions.

There are no geotechnical or natural hazard restrictions for the location and appropriateness of building sites.

8. Conclusions

We find that the site and the proposed development are typical of the wider area and environs. There are no unusual hazards or special site conditions. We conclude that the site is suitable for the proposed commercial subdivision.

A Statement of Professional Opinion on the suitability of land subdivision is attached in Appendix C.

9. Disclaimer

This report has been prepared by Eliot Sinclair & Partners Limited ("Eliot Sinclair") only for the intended purpose as a Natural Hazards Risk Assessment for resource consent application purposes.

The report is based on:

- Available data from the New Zealand Geotechnical Database (NZGD), Canterbury Maps and the Institute of Geological & Nuclear Sciences' (GNS) Active Faults Database,
- Walkover inspections (June 2018, September 2021 & February 2022)
- Eliot Sinclair's geotechnical investigation and reporting⁹
- Eliot Sinclair's Infrastructure Design Report¹⁰
- Geotechnical investigation and reporting by others^{11,12}

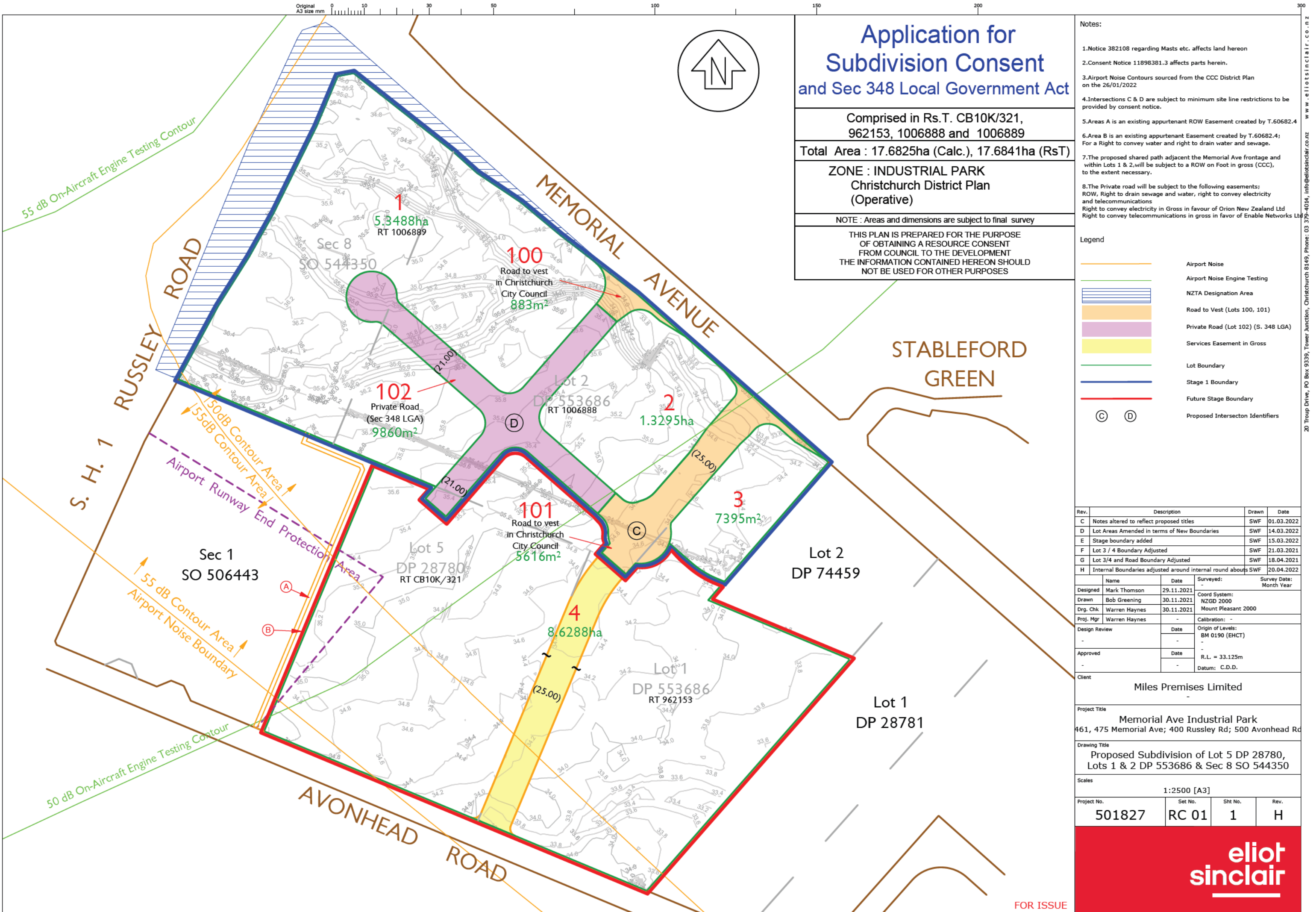
Where data supplied by Miles Premises Limited or other external sources, including previous site investigation reports, have been relied upon, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Eliot Sinclair for incomplete or inaccurate data supplied by other parties.

Whilst every care has been taken during our investigation and interpretation of the subsurface conditions to ensure that the conclusions drawn, and the opinions and recommendations expressed are correct at the time of reporting, Eliot Sinclair has not performed an assessment of all possible conditions or circumstances that may exist at the site. Variations in conditions may occur between investigatory locations and there may be conditions such as subsoil strata and features that were not detected by the scope of the investigation that was carried out or have been covered over or obscured over time. Additionally, on-going seismicity in the general area may lead to deterioration or additional ground settlement that could not have been anticipated at the time of writing this report. Eliot Sinclair does not provide any warranty, either express or implied, that all conditions will conform exactly to the assessments contained in this report.

The exposure of conditions that vary from those described in this report, or occurrence of additional strong seismicity, or any future update of MBIE's guidelines may require a review of our recommendations. Eliot Sinclair should be contacted to confirm the validity of this report should any of these occur.

This report has been prepared for the benefit of Miles Premises Limited and the Christchurch City Council for the purposes as stated above. This report is specifically prepared for the proposed subdivision and should not be used to support any future consent application without prior review and approval by Eliot Sinclair. No liability is accepted by Eliot Sinclair or any of their employees with respect to the use of this report, in whole or in part, for any other purpose or by any other party.

Appendix A. Application for Subdivision Consent Plan



Application for Subdivision Consent and Sec 348 Local Government Act

Comprised in Rs.T. CB10K/321, 962153, 1006888 and 1006889

Total Area : 17.6825ha (Calc.), 17.6841ha (RsT)

ZONE : INDUSTRIAL PARK
Christchurch District Plan
(Operative)

NOTE : Areas and dimensions are subject to final survey

THIS PLAN IS PREPARED FOR THE PURPOSE OF OBTAINING A RESOURCE CONSENT FROM COUNCIL TO THE DEVELOPMENT. THE INFORMATION CONTAINED HEREON SHOULD NOT BE USED FOR OTHER PURPOSES

Notes:

1.Notice 382108 regarding Masts etc. affects land hereon

2.Consent Notice 11898381.3 affects parts herein.

3.Airport Noise Contours sourced from the CCC District Plan on the 26/01/2022

4.Intersections C & D are subject to minimum site line restrictions to be provided by consent notice.

5.Areas A is an existing appurtenant ROW Easement created by T.60682.4

6.Area B is an existing appurtenant Easement created by T.60682.4; For a Right to convey water and right to drain water and sewage.

7.The proposed shared path adjacent the Memorial Ave frontage and within Lots 1 & 2, will be subject to a ROW on Foot in gross (CCC), to the extent necessary.

8.The Private road will be subject to the following easements; ROW, Right to drain sewage and water, right to convey electricity and telecommunications
Right to convey electricity in Gross in favour of Orion New Zealand Ltd
Right to convey telecommunications in gross in favor of Enable Networks Ltd

Legend

Airport Noise

Airport Noise Engine Testing

NZTA Designation Area

Road to Vest (Lots 100, 101)

Private Road (Lot 102) (S. 348 LGA)

Services Easement in Gross

Lot Boundary

Stage 1 Boundary

Future Stage Boundary

C

D

Proposed Intersection Identifiers

Rev.	Description	Drawn	Date
C	Notes altered to reflect proposed titles	SWF	01.03.2022
D	Lot Areas Amended in terms of New Boundaries	SWF	14.03.2022
E	Stage boundary added	SWF	15.03.2022
F	Lot 3 / 4 Boundary Adjusted	SWF	21.03.2021
G	Lot 3/4 and Road Boundary Adjusted	SWF	18.04.2021
H	Internal Boundaries adjusted around internal roundabouts SWF	SWF	20.04.2022

Name	Date	Surveyed:	Survey Date:
Designed	Mark Thomson	29.11.2021	Month Year
Drawn	Bob Greening	30.11.2021	Coord System:
Org. Chk	Warren Haynes	30.11.2021	NZGD 2000
Proj. Mgr	Warren Haynes	-	Mount Pleasant 2000
Design Review	-	Date	Calibration: -
-	-	-	Origin of Levels:
Approved	-	Date	BM 0190 (EHCT)
-	-	-	-
-	-	Date	R.L. = 33.125m
-	-	-	Datum: C.D.D.

Client	Miles Premises Limited		
Project Title	Memorial Ave Industrial Park 461, 475 Memorial Ave; 400 Russley Rd; 500 Avonhead Rd		
Drawing Title	Proposed Subdivision of Lot 5 DP 28780, Lots 1 & 2 DP 553686 & Sec 8 SO 544350		
Scales	1:2500 [A3]		
Project No.	Set No.	Sht No.	Rev.
501827	RC 01	1	H



Appendix B. ESP Natural Hazard Summary Table

Natural Hazards Risk Assessment Summary Table¹

Natural hazard	Current land use		Current risk	Subdivided land		Residual risk	Conclusion	Key references ²
	Likelihood of hazard occurring	Consequence of hazard		Likelihood of hazard occurring	Consequence of hazard			
Intense rainfall events causing flooding from rivers, streams, overland flow and lakes	Low The site is located well away from any significant waterways Natural overland flow paths are truncated by SH1 Russley Rd on the upstream boundaries of the site	Low The site is a rural pasture environment	Low	Low Reasons as for current land use	Medium - High Buildings could be flooded with disruption to businesses	Low The site will be specifically assessed and engineered to avoid exacerbating the hazard and to mitigate the risk to acceptable levels to CCC design approval. FFLs will be set and earthworks fill placed to provide suitable building platforms, as appropriate.	OK	Walkover inspection CCC online floor level map Liaison with CCC - the site's flood assessment is mapped as incomplete. CCC has confirmed the site is not in the FMA. FFLs apply across the site. Eliot Sinclair's Infrastructure Design Report, Reference 501827 dated April 2022
Erosion	Low See comments for inundation risk, above	Low The site is a rural pasture environment	Low	Low Comments as above	Low The site has low vulnerability to erosion	Low	OK	As above
Earthquakes – shaking	High NZ is a seismically active country	Low The site is a rural pasture environment	Low	High NZ is a seismically active country	Low Buildings and infrastructure will be designed, consented and built to normal acceptable industry standards and NZBC compliance.	Low	OK	NZ Building Code NZGS Modules NZS1170.5 CCC CCS & IDS Site-specific geotechnical investigation (Aurecon, 2014), (Riley, 2016), (ESP, 2021 ³)

¹ The risk assessment is informed by site inspection, desk study, local knowledge and input from suitably qualified personnel with sufficient experience to apply professional judgement in interpreting the reference documents.

² Other relevant references may exist, but for the purposes of this summary table key references are listed as an indication of the sources reviewed.

³ Geotechnical Investigation and Report for Miles Remises – Memorial Avenue, prepared for Miles Premises Limited by Eliot Sinclair, reference 501827 dated 18 October 2021.

Natural hazard	Current land use		Current risk	Subdivided land		Residual risk	Conclusion	Key references ²
	Likelihood of hazard occurring	Consequence of hazard		Likelihood of hazard occurring	Consequence of hazard			
Earthquakes – fault rupture	Low The nearest mapped active fault (Greendale Fault) is over 15km to the SW	Low The site is a rural pasture environment	Low	Low Reasons as for current land use	High Effects could include rupture of buildings and infrastructure	High? The residual risk is high although the likelihood is low, more likely 'rare'.	OK⁴	GNS online active faults database MfE Guidance: Planning for development of land on or close to active faults: A guideline to assist resource management planners in NZ
Subsidence	Low The site is largely underlain by natural alluvial soil, being silt/sand mixtures overlying a body of sandy gravel. Localised areas of unsuitable ground, soft ground, peat, paleo-channels or uncontrolled fill may exist.	Low The site is a rural pasture environment	Low	Low The ground conditions at the site are typical of the wider area and environs. Normal subdivision engineering and normal site-specific geotechnical assessment for foundations is required.	Low Earthworks and foundation engineering will mitigate the hazard if it exists.	Low	OK	Walkover inspection Aerial photos dating from 1940s New Zealand Geotechnical Database Site-specific geotechnical investigation (Aurecon, 2014), (Riley, 2016), (ESP, 2021 ⁵) Preliminary and Detailed Site Investigation (PSI/DSI) report ⁶ prepared by ESP dated April 2022
Liquefaction	Low The site is not within the CCC Liquefaction Management Area (LMA) The site is assessed as Technical Category 1 (TC1)	Low The site is a rural pasture environment	Low	Low Reasons as for current land use	Low Buildings and infrastructure will be designed, consented and built to normal acceptable industry standards and NZBC compliance	Low	OK	CCC Liquefaction Vulnerability online mapping CCC District Plan natural hazards overlays New Zealand Geotechnical Database Site-specific geotechnical investigation and reporting (Aurecon 2014), (Riley, 2016), (ESP, 2021)

⁴ Outside of a specific fault avoidance zone land development is not required to consider the effects of fault rupture i.e. it is an accepted background risk. Design of foundation to the NZBC is deemed to mitigate the risk.

⁵ Geotechnical Investigation and Report for Miles Remises – Memorial Avenue, prepared for Miles Premises Limited by Eliot Sinclair, reference 501827 dated 18 October 2021.

⁶ Preliminary and Detailed Site Investigation at 400 Russley Rd, 475 Memorial Ave and 500 & 520 Avonhead Road prepared by Eliot Sinclair, Reference 501827.

Natural hazard	Current land use		Current risk	Subdivided land		Residual risk	Conclusion	Key references ⁷
	Likelihood of hazard occurring	Consequence of hazard		Likelihood of hazard occurring	Consequence of hazard			
Slope stability, falling debris, slippage; being cliff collapse, rockfall or boulder roll, and mass movement	Low The site is on the Canterbury Plains and is not vulnerable to on-site or off-site slope hazards	<i>Not applicable</i> No hazard source	Nil	Low Reasons as for current land use	<i>Not applicable</i> No hazard source	Nil	OK	Site inspection
Tsunami	Low The site is over 12km from the coast is over 20m above sea level	Low The site is a rural pasture environment	Low	Low Reasons as for current land use	Low Buildings and infrastructure will be designed, consented and built to normal acceptable industry standards and NZBC compliance	Low	OK	Desk study Site inspection
Inundation from the sea and storm surge								
Coastal erosion								
Fire	Low Grass is grazed or cut NZ Fire Service and Airport Fire Service are close at hand	Low The site is a rural pasture environment	Low	Low Grass fire risk is essentially nullified Buildings will be specifically designed to fire safety standards	Low NZ Fire Service and Airport Fire Service are close at hand	Low	OK	NZBC

⁷ Other relevant references may exist, but for the purposes of this summary table key references are listed as an indication of the sources reviewed.

Natural hazard	Current land use		Current risk	Subdivided land		Residual risk	Conclusion	Key references ⁸
	Likelihood of hazard occurring	Consequence of hazard		Likelihood of hazard occurring	Consequence of hazard			
Exacerbation of some of the hazards above through climate change and sea level rise	<u>Climate change</u> High Climate change is forecast and the site is subject to the climate conditions	Low The site is a rural pasture environment	Low	High Reasons as for current land use	Low Buildings and infrastructure will be designed, consented and built to normal acceptable industry standards and NZBC compliance	Low	OK	MfE guidance on climate change in Canterbury https://environment.govt.nz/facts-and-science/climate-change/impacts-of-climate-change-per-region/projections-canterbury-region/
	<u>Sea level rise</u> Low The site is over 12km from the coast is over 20m above sea level	Low The site is a rural pasture environment		Low Reasons as for current land use	Low			
Multiple hazards consisting of combinations of the above	Low The likelihood of concurrent hazards is rare/low.	Low Each hazard has a low individual consequence at site	Low	Low The likelihood of concurrent hazards is rare/low.	Low	Low	OK	See key references for each individual risk, above.

⁸ Other relevant references may exist, but for the purposes of this summary table key references are listed as an indication of the sources reviewed.

Appendix C. Statement of Professional Opinion

APPENDIX I

Statement of Professional Opinion on the Suitability of Land for Subdivision

ISSUED BY: _____
(Geotechnical engineering firm or suitably qualified Geoprofessional)

TO: _____
(Territorial authority)

TO BE SUPPLIED TO: _____
(Owner/Developer)

IN RESPECT OF: _____
(Description of infrastructure/land development)

AT: _____

(Address)

I _____ on behalf of
(Geoprofessional)

(Geotechnical engineering firm)

hereby confirm:

1. I am a suitably qualified and experienced Geoprofessional employed by _____ and the geotechnical firm named above was retained by the owner/developer as the Geoprofessional on the above proposed development.

2. The geotechnical assessment report, dated _____ has been carried out in accordance with the Ministry of Business, Innovation and Employment *Part D - Guidelines for the geotechnical investigation and assessment of subdivisions in the Canterbury region* and the Christchurch City Council *Infrastructure Design Standard – Part 4: Geotechnical Requirements* and includes:

- (i) Details of and the results of my/the site investigations.
- (ii) A liquefaction and lateral spread assessment.
- (iii) An assessment of rockfall and slippage, including hazards resulting from seismic activity.
- (iv) An assessment of the slope stability and ground bearing capacity confirming the location and appropriateness of building sites.
- (v) Recommendations proposing measures to avoid, remedy or mitigate any potential hazards on the land subject to the application, in accordance with the provisions of Section 106 of the Resource Management Act 1991.

3. In my professional opinion, not to be construed as a guarantee, I consider that Council is justified in granting consent incorporating the following conditions:

(i) _____

(ii) _____

4. This professional opinion is furnished to the territorial authority and the owner/developer for their purposes alone, on the express condition that it will not be relied upon by any other person and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any building. It is limited to those items referred to in clause 2 only.

5. This statement shall be read in conjunction with the geotechnical report referred to in clause 2 above, and shall not be copied or reproduced except in conjunction with the full geotechnical completion report.

6. Liability under this statement accrues to the geotechnical firm only and no liability shall accrue to the individual completing this statement.

7. The geotechnical engineering firm issuing this statement holds a current policy of professional indemnity insurance of no less than \$_____

(Minimum amount of insurance shall be commensurate with the current amounts recommended by IPENZ, ACENZ, NZTA, INGENIUM.)

_____ Date: _____

(Signature of engineer, for and on behalf of _____)

Qualifications and experience

This form is to accompany Form 9 – Resource Management Act 1991 (Application for a Resource Consent (Subdivision))