APPLICATION AS NOTIFIED

Laming Family Trust

(RM240806)

FORM 12

File Number RM240806

QUEENSTOWN LAKES DISTRICT COUNCIL

PUBLIC NOTIFICATION

Notification of an application for a Resource Consent under Section 95A of the Resource Management Act 1991.

The Queenstown Lakes District Council has received an application for a resource consent from:

Laming Family Trust

What is proposed:

To undertake a two-lot subdivision, and establish a residential building platform that breaches the standard for clearance of indigenous vegetation, and earthworks area, and cut and fill height; and

Undertake earthworks on a Hazardous Activities and Industries List (HAIL) site, disturbing more than 25m2 per 500m2.

The location in respect of which this application relates is situated at:

538 Wanaka-Mount Aspiring Road, Wanaka

The application includes an assessment of environmental effects. This file can also be viewed at our public computers at these Council offices during normal office hours (8:30am to 5:00pm):

- **10 Gorge Road, Queenstown; and**
- **47 Ardmore Street, Wanaka.**

Alternatively, you can view them online when the submission period commences, by the following methods:

- **On our website: https://www.qldc.govt.nz/services/resource-consents/notified-resource-consents#public-rc**
- **Or via our eDocs website using RM240806 as the reference: https://edocs.qldc.govt.nz/Account/Login**

The Council planner processing this application on behalf of the Council is Georgie Hadfield, who may be contacted by phone at 03 450 2386 or email at georgie.hadfield@qldc.govt.nz.

Any person may make a submission on the application, but a person who is a trade competitor of the applicant may do so only if that person is directly affected by an effect of the activity to which the application relates that –

a) adversely affects the environment; and
b) does not relate to trade competition or the effects of trade competition.

If you wish to make a submission on this application, you may do so by sending a written submission to the consent authority no later than:

Monday 24th February 2025

The submission must be dated, signed by you and must include the following information:

a) Your name and postal address and phone number/fax number.
b) Details of the application in respect of which you are making the submission including location.
c) Whether you support or oppose the application.
d) Your submission, with reasons.
e) The decision you wish the consent authority to make.
f) Whether you wish to be heard in support of your submission.

You may make a submission by sending a written or electronic submission to Council (details below). The submission should be in the format of Form 13. Copies of this form are available Council website:

https://www.qldc.govt.nz/services/resource-consents/application-forms-and-fees#other_forms

You must serve a copy of your submission to the applicant (Laming Family Trust) as soon as reasonably practicable after serving your submission to Council:

C/- Sean Dent
sean@southernplanning.co.nz
Southern Planning Group
Level 1 (Building A) 19 Grant Road, Frankton 9300, or
15 Old Saleyard Road, Cromwell 9310

QUEENSTOWN LAKES DISTRICT COUNCIL

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(signed by Ian Bayliss, Senior Planner pursuant to a delegation given under Section 34A of the Resource Management Act 1991)

Date of Notification: 24 January 2025

Address for Service for Consent Authority:

Queenstown Lakes District Council	**Phone**	**03 441 0499**
Private Bag 50072, Queenstown 9348	**Email**	**rcsubmission@qldc.govt.nz**
Gorge Road, Queenstown 9300	**Website**	**www.qldc.govt.nz**

TechnologyOne ECM Document Summary

Printed On 15-Jan-2025

Class	Description	Doc Set Id / Note Id	Version	Date
PUB_ACC	Form 9	8317957	1	02-Oct-2024
PUB_ACC	AEE	8317063	1	01-Oct-2024
PUB_ACC	Appendix [A] - Site Location Plan	8317062	1	01-Oct-2024
PUB_ACC	Appendix [B] - Record of Title OT203/280	8317061	1	01-Oct-2024
PUB_ACC	Appendix [C] - Plans - Updated 12/11/2024	8376656	1	15-Nov-2024
PUB_ACC	Appendix [E] - Southern Land Infrastructure Report	8317058	1	01-Oct-2024
PUB_ACC	Appendix [F] - GeoSolve Geotech & Soakage Report	8317057	1	01-Oct-2024
PUB_ACC	Appendix [G] Ecological Assessment (uncorrupted version)	8436708	1	13-Jan-2025
PUB_ACC	Appendix [H] - Insight Engineering PSI	8317055	1	01-Oct-2024
PUB_ACC	Appendix [I] - RMM Landscape Assessment & Graphic Attachment	8317054	1	01-Oct-2024
PUB_ACC	Appendix [J] - NPS-HPL Compass Report	8317053	1	01-Oct-2024
PUB_ACC	Environmental Management Plan	8376657	1	15-Nov-2024

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APPLICATION FOR RESOURCE CONSENT OR
FAST TRACK RESOURCE CONSENT

FORM 9: GENERAL APPLICATION

QUEENSTOWN LAKES DISTRICT COUNCIL

Under Section 87AAC, 88 & 145 of the Resource Management Act 1991 (Form 9)

PLEASE COMPLETE ALL MANDATORY FIELDS* OF THIS FORM.

This form provides contact information and details of your application. If your form does not provide the required information it will be returned to you to complete. Until we receive a completed form and payment of the initial fee, your application may not be accepted for processing.

APPLICANT //

- Must be a person or legal entity (limited liability company or trust).
- Full names of all trustees required.
- The applicant name(s) will be the consent holder(s) responsible for the consent and any associated costs.

*Applicant's Full Name / Company / Trust: Laming Family Trust
(Name Decision is to be issued in)

All trustee names (if applicable): Simon B Laming, Vivienne Mary Laming, A J Wood

*Contact name for company or trust: Simon Laming

*Postal Address: 311 Thames Street, Oamaru

*Post code: 9040

*Contact details supplied must be for the applicant and not for an agent acting on their behalf and must include a valid postal address

*Email Address: Simon@vet111.co.nz

*Phone Numbers: Day 03 4345666

Mobile: 0274 346080

*The Applicant is:

- [x] Owner
- [ ] Prospective Purchaser (of the site to which the application relates)
- [x] Occupier
- [ ] Lessee
- Other - Please Specify:

[x] Our preferred methods of corresponding with you are by email and phone.
The decision will be sent to the Correspondence Details by email unless requested otherwise.

CORRESPONDENCE DETAILS // If you are acting on behalf of the applicant e.g. agent, consultant or architect please fill in your details in this section.

*Name & Company: Southern Planning Group - Sean Dent

*Phone Numbers: Day

Mobile: 021 946 55

*Email Address: sean@southernplanning.co.nz

*Postal Address: PO BOX 1081 Queenstown

*Postcode: 9348

INVOICING DETAILS //

Invoices will be made out to the applicant but can be sent to another party if paying on the applicant's behalf.
For more information regarding payment please refer to the Fees Information section of this form.

*Please select a preference for who should receive any invoices and how they would like to receive them.

- Applicant: [x]
- Agent: [ ]
- Other - Please specify:
- Email: [x]
- Post: [ ]

*Attention: Simon Laming

*Postal Address: 311 Thames Street, Oamaru

*Post code: 9040

*Please provide an email AND full postal address.

*Email: Simon@vet111.co.nz

OWNER DETAILS // Please supply owner details for the subject site/property if not already indicated above

Owner Name:

Owner Address:

Owner Email:

If the property has recently changed ownership please indicate on what date (approximately) AND the names of the previous owners:

Date:

Names:

DEVELOPMENT CONTRIBUTIONS INVOICING DETAILS //

If it is assessed that your consent requires development contributions any invoices and correspondence relating to these will be sent via email. Invoices will be sent to the email address provided above unless an alternative address is provided below. Invoices will be made out to the applicant/owner but can be sent to another party if paying on the applicant's behalf.

*Please select a preference for who should receive any invoices.

Details are the same as for invoicing ☑

Applicant: ☑ Landowner: ☐ Other, please specify:

*Attention: Simon Laming

*Email: Simon@vet111.co.nz

Click here for further information and our estimate request form

DETAILS OF SITE // Legal description field must list legal descriptions for all sites pertaining to the application. Any fields stating 'refer AEE' will result in return of the form to be fully completed.

*Address / Location to which this application relates:

538 Wanaka Mt Aspiring Road, Wanaka

*Legal Description: Can be found on the Computer Freehold Register or Rates Notice – e.g Lot x DPxxx (or valuation number)

Section 6 Blk XIII Lower Wanaka SD as held in Record of Title OT203/280.

District Plan Zone(s): Rural, ONL, Mt Alpha ONL Landscape Priority Area

SITE VISIT REQUIREMENTS // Should a Council officer need to undertake a site visit please answer the questions below

Is there a gate or security system restricting access by council?	YES ☑	NO ☐
Is there a dog on the property?	YES ☐	NO ☑
Are there any other hazards or entry restrictions that council staff need to be aware of? If 'yes' please provide information below	YES ☑	NO ☐

Gate to site is locked and it is actively farmed so permission needs to be obtained prior to entering. Please contact SPG in the first instance to arrange this.

PRE-APPLICATION MEETING OR URBAN DESIGN PANEL

Have you had a pre-application meeting with QLDC or attended the urban design panel regarding this proposal?

☐ Yes ☑ No ☐ Copy of minutes attached

If 'yes', provide the reference number and/or name of staff member involved:

CONSENT(S) APPLIED FOR // * Identify all consents sought // ALSO FILL IN OTHER CONSENTS SECTION BELOW

☐ Land use consent

☑ Subdivision consent

☐ Change/cancellation of consent or consent notice conditions

☐ Certificate of compliance

☐ Extension of lapse period of consent (time extension) s125

☐ Existing use certificate

☑ Land use consent includes Earthworks

QUALIFIED FAST-TRACK APPLICATION UNDER SECTION 87AAC

☐ Controlled Activity

☐ Deemed Permitted Boundary Activity

If your consent qualifies as a fast-track application under section 87AAC, tick here to opt out of the fast track process ☐

BRIEF DESCRIPTION OF THE PROPOSAL //

*Please complete this section, any form stating 'refer AEE' will be returned to be completed with a description of the proposal

*Consent is sought to:

Resource consent is sought to establish a residential building platform and undertake a two-lot subdivision. Resource consent is also required for clearance of indigenous vegetation, earthworks associated with the development and for earthworks on a HAIL site.

APPLICATION NOTIFICATION

Are you requesting public notification for the application?

☑ Yes ☐ No

Please note there is an additional fee payable for notification. Please refer to Fees schedule

OTHER CONSENTS

Is consent required under a National Environmental Standard (NES)?

- NES for Assessing and Managing Contaminants in Soil to Protect Human Health 2012

An applicant is required to address the NES in regard to past use of the land which could contaminate soil to a level that poses a risk to human health. Information regarding the NES is available on the website https://environment.govt.nz/publications/national-environmental-standard-for-assessing-and-managing-contaminants-in-soil-to-protect-human-health-information-for-landowners-and-developers/

You can address the NES in your application AEE OR by selecting ONE of the following:

☐ This application does not involve subdivision (excluding production land), change of use or removal of (part of) a fuel storage system. Any earthworks will meet section 8(3) of the NES (including volume not exceeding 25m^3 per 500m^2). Therefore the NES does not apply.

☐ I have undertaken a comprehensive review of District and Regional Council records and I have found no record suggesting an activity on the HAIL has taken place on the piece of land which is subject to this application.
NOTE: depending on the scale and nature of your proposal you may be required to provide details of the records reviewed and the details found.

OTHER CONSENTS // CONTINUED

☑ I have included a Preliminary Site Investigation undertaken by a suitably qualified person.

☐ An activity listed on the HAIL has more likely than not taken place on the piece of land which is subject to this application. I have addressed the NES requirements in the Assessment of Environmental Effects.

■ Any other National Environmental Standard

☐ Yes ☑ N/A

Do you need any consent(s) from Otago Regional Council?

☑ Yes ☐ N/A

If Yes have you applied for it?

☐ Yes ☑ No

If Yes supply ORC Consent Reference(s)

If ORC Earthworks Consent is required would you like a joint site visit ?

☐ Yes ☑ No

INFORMATION REQUIRED TO BE SUBMITTED //

Attach to this form any information required (see below & appendices 1-2).

To be accepted for processing, your application should include the following:

☑ Record of Title for the property (no more than 3 months old) and copies of any consent notices and covenants
(Can be obtained from Land Information NZ at https://www.linz.govt.nz/).

☑ A plan or map showing the locality of the site, topographical features, buildings etc.

☑ A site plan at a convenient scale.

☑ Written approval of every person who may be adversely affected by the granting of consent (s95E).

☑ An Assessment of Effects (AEE).
An AEE is a written document outlining how the potential effects of the activity have been considered along with any other relevant matters, for example if a consent notice is proposed to be changed. Address the relevant provisions of the District Plan and affected parties including who has or has not provided written approval. See Appendix 1 for more detail.

☑ We prefer to receive applications electronically – please see Appendix 5 – Naming of Documents Guide for how documents should be named. Please ensure documents are scanned at a minimum resolution of 300 dpi. Each document should be no greater than 10mb

PRIVACY INFORMATION

The information you have provided on this form is required so that your application can be processed under the Resource Management Act 1991 and may also be used in statistics collected and provided to the Ministry for the Environment and Queenstown Lakes District Council. The information will be stored on a public register and may be made available to the public on request or on the company's or the Council's websites.

FEES INFORMATION

Section 36 of the Resource Management Act 1991 deals with administrative charges and allows a local authority to levy charges that relate to, but are not limited to, carrying out its functions in relation to receiving, processing and granting of resource consents (including certificates of compliance and existing use certificates).

Invoiced sums are payable by the 20th of the month after the work was undertaken. If unpaid, the processing of an application, provision of a service, or performance of a function will be suspended until the sum is paid. You may also be required to make an additional payment, or bring the account up to date, prior to milestones such as notification, setting a hearing date or releasing the decision. In particular, all charges related to processing of a resource consent application are payable prior to issuing of the decision. Payment is due on the 20th of the month or prior to the issue date – whichever is earlier.

FEES INFORMATION // CONTINUED

If your application is notified or requires a hearing you will be requested to pay a notification deposit and/or a hearing deposit. An applicant may not offset any invoiced processing charges against such payments.

Section 357B of the Resource Management Act provides a right of objection in respect of additional charges. An objection must be in writing and must be lodged within 15 working days of notification of the decision.

LIABILITY FOR PAYMENT – Please note that by signing and lodging this application form you are acknowledging that the details in the invoicing section are responsible for payment of invoices and in addition will be liable to pay all costs and expenses of debt recovery and/or legal costs incurred by QLDC related to the enforcement of any debt.

MONITORING FEES – Please also note that the fee paid at lodgement includes an initial monitoring fee of $287 for land use resource consent applications and designation related applications, as once Resource Consent is approved you will be required to meet the costs of monitoring any conditions applying to the consent, pursuant to Section 35 of the Resource Management Act 1991.

DEVELOPMENT CONTRIBUTIONS – Your development, if granted, may also incur development contributions under the Local Government Act 2002. You will be liable for payment of any such contributions.

A list of Consent Charges is available on the on the Resource Consent Application Forms section of the QLDC website. If you are unsure of the amount to pay, please call 03 441 0499 and ask to speak to our duty planner.

Please ensure to reference any banking payments correctly. Incorrectly referenced payments may cause delays to the processing of your application whilst payment is identified.

If the initial fee charged is insufficient to cover the actual and reasonable costs of work undertaken on the application you will be required to pay any additional amounts and will be invoiced monthly as work on the application continues. Please note that if the Applicant has outstanding fees owing to Council in respect of other applications, Council may choose to apply the initial fee to any outstanding balances in which case the initial fee for processing this application may be deemed not to have been paid.

PAYMENT// An initial fee must be paid prior to or at the time of the application and proof of payment submitted. Unless you have requested an invoice.

Please reference your payments as follows:

Applications yet to be submitted: RM followed by first 5 letters of applicant name e.g RMJONES

Applications already submitted: Please use the RM# reference that has been assigned to your application, this will have been emailed to yourself or your agent and included on the invoice.

Please note processing will not begin until payment is received (or identified if incorrectly referenced).

I confirm payment by:

- ☐ Bank transfer to account 02 0948 0002000 00 (If paying from overseas swiftcode is – BKNZNZ22)
- ☑ Invoice for initial fee requested and payment to follow
- ☐ Manual Payment (can only be accepted once application has been lodged and acknowledgement email received with your unique RM reference number)

Reference: Laming Family Trust

Amount Paid: Land Use and Subdivision Resource Consent fees - please select from drop down list below

$3881 - Other subdivision (e.g. Rural Residential, Rural Lifestyle)

(For required initial fees refer to website for Resource Consent Charges or speak to the Duty Planner by phoning 03 441 0499)

Date of Payment: 10/1/24

APPLICATION & DECLARATION

The Council relies on the information contained in this application being complete and accurate. The Applicant must take all reasonable steps to ensure that it is complete and accurate and accepts responsibility for information in this application being so.

○ If lodging this application as the Applicant:

I/we hereby represent and warrant that I am/we are aware of all of my/our obligations arising under this application including, in particular but without limitation, my/our obligation to pay all fees and administrative charges (including debt recovery and legal expenses) payable under this application as referred to within the Fees Information section.

OR:

◉ If lodging this application as agent of the Applicant:

I/we hereby represent and warrant that I am/we are authorised to act as agent of the Applicant in respect of the completion and lodging of this application and that the Applicant / Agent whose details are in the invoicing section is aware of all of his/her/its obligations arising under this application including, in particular but without limitation, his/her/its obligation to pay all fees and administrative charges (including debt recovery and legal expenses) payable under this application as referred to within the Fees Information section.

☑ I hereby apply for the resource consent(s) for the Proposal described above and I certify that, to the best of my knowledge and belief, the information given in this application is complete and accurate.

PLEASE TICK

Signed (by or as authorised agent of the Applicant) ** Sean Dent

Digitally signed by Sean Dent
Date: 2024.10.01 16:13:41 +13'00'

Full name of person lodging this form Sean Dent

Firm/Company Southern Planning Group

Dated 1.10.24

**If this form is being completed on-line you will not be able, or required, to sign this form and the on-line lodgement will be treated as confirmation of your acknowledgement and acceptance of the above responsibilities and liabilities and that you have made the above representations, warranties and certification.

Section 2 of the District Plan provides additional information on the information that should be submitted with a land use or subdivision consent.

The RMA (Fourth Schedule to the Act) requires the following:

1 INFORMATION MUST BE SPECIFIED IN SUFFICIENT DETAIL

- Any information required by this schedule, including an assessment under clause 2(1)(f) or (g), must be specified in sufficient detail to satisfy the purpose for which it is required.

2 INFORMATION REQUIRED IN ALL APPLICATIONS

- (1) An application for a resource consent for an activity (the activity) must include the following:
    - (a) a description of the activity:
    - (b) a description of the site at which the activity is to occur:
    - (c) the full name and address of each owner or occupier of the site:
    - (d) a description of any other activities that are part of the proposal to which the application relates:
    - (e) a description of any other resource consents required for the proposal to which the application relates:

    Information provided within the Form above

    - (f) an assessment of the activity against the matters set out in Part 2:
    - (g) an assessment of the activity against any relevant provisions of a document referred to in section 104(1)(b).

    (2) The assessment under subclause (1)(g) must include an assessment of the activity against—

    - (a) any relevant objectives, policies, or rules in a document; and
    - (b) any relevant requirements, conditions, or permissions in any rules in a document; and
    - (c) any other relevant requirements in a document (for example, in a national environmental standard or other regulations).

    (3) An application must also include an assessment of the activity's effects on the environment that—

    - (a) includes the information required by clause 6; and
    - (b) addresses the matters specified in clause 7; and
    - (c) includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.

    Include in an attached Assessment of Effects (see Clauses 6 & 7 below)

ADDITIONAL INFORMATION REQUIRED IN SOME APPLICATIONS

- An application must also include any of the following that apply:
    - (a) if any permitted activity is part of the proposal to which the application relates, a description of the permitted activity that demonstrates that it complies with the requirements, conditions, and permissions for the permitted activity (so that a resource consent is not required for that activity under section 87A(1)):
    - (b) if the application is affected by section 124 or 165ZH(1)(c) (which relate to existing resource consents), an assessment of the value of the investment of the existing consent holder (for the purposes of section 104(2A)):

Clause 6: Information required in assessment of environmental effects

- (1) An assessment of the activity's effects on the environment must include the following information:
    - (a) if it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:
    - (b) an assessment of the actual or potential effect on the environment of the activity:
    - (c) if the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment that are likely to arise from such use:
    - (d) if the activity includes the discharge of any contaminant, a description of—
        - (i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and
        - (ii) any possible alternative methods of discharge, including discharge into any other receiving environment:
    - (e) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect:
    - (f) identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:
    - (g) if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:
    - (h) if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).

(2) A requirement to include information in the assessment of environmental effects is subject to the provisions of any policy statement or plan.

(3) To avoid doubt, subclause (1)(f) obliges an applicant to report as to the persons identified as being affected by the proposal, but does not—

- (a) oblige the applicant to consult any person; or
- (b) create any ground for expecting that the applicant will consult any person.

CLAUSE 7: MATTERS THAT MUST BE ADDRESSED BY ASSESSMENT OF ENVIRONMENTAL EFFECTS

- (1) An assessment of the activity's effects on the environment must address the following matters:
    - (a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:
    - (b) any physical effect on the locality, including any landscape and visual effects:
    - (c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:
    - (d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:
    - (e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:
    - (f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.

(2) The requirement to address a matter in the assessment of environmental effects is subject to the provisions of any policy statement or plan.

A2 APPENDIX 2 // Information requirements for subdivision

UNDER THE FOURTH SCHEDULE TO THE ACT:

- An application for a subdivision consent must also include information that adequately defines the following:
    - (a) the position of all new boundaries:
    - (b) the areas of all new allotments, unless the subdivision involves a cross lease, company lease, or unit plan:
    - (c) the locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips:
    - (d) the locations and areas of any existing esplanade reserves, esplanade strips, and access strips:
    - (e) the locations and areas of any part of the bed of a river or lake to be vested in a territorial authority under section 237A:
    - (f) the locations and areas of any land within the coastal marine area (which is to become part of the common marine and coastal area under section 237A):
    - (g) the locations and areas of land to be set aside as new roads.

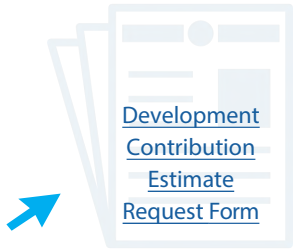
A3 APPENDIX 3 // Development Contributions

Will your resource consent result in a Development Contribution and what is it?

- A Development Contribution can be triggered by the granting of a resource consent and is a financial charge levied on new developments. It is assessed and collected under the Local Government Act 2002. It is intended to ensure that any party, who creates additional demand on Council infrastructure, contributes to the extra cost that they impose on the community. These contributions are related to the provision of the following council services:
    - Water supply
    - Wastewater supply
    - Stormwater supply
    - Reserves, Reserve Improvements and Community Facilities
    - Transportation (also known as Roading)

Click here for more information on development contributions and their charges

OR Submit an Estimate request *please note administration charges will apply



A4 APPENDIX 4 // Fast - Track Application

Please note that some land use consents can be dealt with as fast track land use consent. This term applies to resource consents where they require a controlled activity and no other activity. A 10 day processing time applies to a fast track consent.

If the consent authority determines that the activity is a deemed permitted boundary activity under section 87BA of the Act, written approval cannot be withdrawn if this process is followed instead.

A fast-track application may cease to be a fast-track application under section 87AAC(2) of the Act.

A5 APPENDIX 5 // Naming of documents guide

While it is not essential that your documents are named the following, it would be helpful if you could title your documents for us. You may have documents that do not fit these names; therefore below is a guide of some of the documents we receive for resource consents. Please use a generic name indicating the type of document.

- Application Form 9
- Assessment of Environmental Effects (AEE)
- Record of Title
- Covenants & Consent Notice
- Affected Party Approval/s
- Landscape Report
- Ecological Report
- Engineering Report
- Geotechnical Report
- Wastewater Assessment
- Traffic Report
- Waste Event Form
- Urban Design Report

Assessment of Environmental Effects

Resource Consent Application for a Residential Building Platform and Two Lot Subdivision

Laming Family Trust

538 Wanaka-Mt Aspiring Road, Wanaka

October 2024

SPG SOUTHERN PLANNING GROUP

Contents

1 The Applicant and Property Details

To:	Queenstown Lakes District Council
Applicant	Laming Family Trust
Site Address	538 Wanaka-Mt Aspiring Road, Wanaka
Address for Service	C/- Southern Planning Group 63 Antimony Crescent, Cromwell, 9310 Attention: Sean Dent **sean@southernplanning.co.nz**
Legal Description:	Section 6 Blk XIII Lower Wanaka SD as held in Record of Title OT203/280.
Site Area:	23.5046Ha.
Operative District Plan Zone:	Rural Zone and Outstanding Natural Landscape (**ONL**) overlay.
Proposed District Plan Zone:	Rural Zone and ONL overlay. Also Landscape Priority Area Mount Alpha ONL 21.22.19.
Brief Description of Proposal:	Resource consent is sought to establish a residential building platform and undertake a two-lot subdivision.
Summary of Reasons for Consent:	Resource consent is required as a Discretionary Activity for subdivision in the Rural Zone. The identification of a residential building platform is also a Discretionary Activity. Resource consent is required for clearance of indigenous vegetation, earthworks associated with the development and for earthworks on a HAIL site.

Appendices

Appendix [A] **Site Location Plan**

Appendix [B] **Record of Title**

Appendix [C] **Proposed Scheme Plan**

Appendix [D] **Proposed Earthworks Plans**

Appendix [E] **Infrastructure Assessment**

Appendix [F] **Geotechnical and Soakage Report**

Appendix [G] **Ecological Assessment**

Appendix [H] **Insight Engineering PSI**

Appendix [I] **RMM Landscape Assessment**

Appendix [J] **Compass Agribusiness NPS-HL Assessment**

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Sean Dent BRS, ASSOC NZPI
DIRECTOR
SOUTHERN PLANNING GROUP

2 Executive Summary

The applicant seeks subdivision consent to subdivide the 23.50Ha site into two Lots. Proposed Lot 1 will comprise a total area of 18.83Ha and will retain the existing residential unit, farm shed, water tanks, and the flat productive pastoral land adjacent to Wanaka Mt Aspiring Road.

Proposed Lot 2 will comprise a total area of 4.67Ha and will contain a proposed residential building platform of 1,000m^2 set amongst existing Kanuka shrubland and proposed indigenous planting.

The proposal includes minor upgrades to the existing vehicle access to implement passing bays and the creation of a new access through the Kanuka on proposed Lot 2 to the proposed building platform.

Mitigation mounding and landscape planting is proposed within proposed Lot 2 as well as ecological offset planting to increase the biodiversity values and offset the Kanuka removal needed to form the new driveway and the proposed building platform.

The subject site is contained in the Rural Zone under the Proposed District Plan (**PDP**). All subdivision and identification of residential building platforms requires a Discretionary Activity Consent.

The clearance of Kanuka and the proposed earthworks both require consent as a Restricted Discretionary Activity.

Consent is also required as a Discretionary Activity under the NES Contaminated Soils Regulations 2012.

Overall, the status of the application is that of a **Discretionary Activity**.

This Assessment of Effects has been prepared in accordance with the requirements of Section 88 and Schedule 4 of the Resource Management Act 1991 (the Act) and is intended to provide the information necessary for a full understanding of the activity for which consent is sought, and any actual or potential effects of the proposal may have on the environment.

The Assessment of Effects considers the effects of the proposal and determines that that the proposal will have no more than minor adverse effects on the environment and nor are any persons considered to be adversely affected by the proposal. However, it is acknowledged that Council is likely to publicly notify the proposal and therefore, to expedite the process, public notification is requested by the applicant.

The proposal is not contrary to the objectives and policies of the PDP. Overall, the proposal is consistent with the purpose and principles of the Act and accords with the definition of sustainable management under Part 2 of the Act.

3 Site Description and Receiving Environment

3.1 Site Description

The subject site is located at 538 Wanaka Mt Aspiring Road, Wanaka. The subject site is rectangular in shape and lies in an approximate east to west orientation situated between Wanka Mt Aspiring Road and the Damper Bay Lakeside Recreation Reserve that separates the sites eastern boundary from Lake Wanaka.

The sites northern boundary adjoins the unformed legal road of Lake Road which also runs in an east to west orientation from Wanaka Mt Aspiring Road to the Damper Bay Lakeside Recreation Reserve.

A site location plan is contained in **Appendix [A]**.

The subject site comprises a total land area of 23.5046Ha. It is legally described as Section 6 Blk XIII Lower Wanaka Survey District and is held in Record of Title OT203/280. A copy of the Record of Title is contained in **Appendix [B]**.

The subject site is comprehensively described in section 4.3 of the landscape assessment prepared by Rough Milne Mitchell Landscape Architects (**RMM**). The key points of their site description are as follows:

> *Landform within the site is comprised of a combination of flat paddocks, which extend some 400m east from Wānaka-Mount Aspiring Road before rising in the form of distinctive gently to steeply sloping glacial hummocky moraine to 360masl, before descending to around 310masl at the eastern lakefront reserve boundary.*
>
> *The existing dwelling and two water tanks are situated at the north-eastern extent of the site overlooking Lake Wanaka, nestled within elevated hummocky terrain, and surrounded by stands of mature kānuka (Kunzea serotina) at approximately 338masl. A farm shed is located within flat terrain to the north. Landcover within the steeper elevated slopes is comprised of rough grass cover, tussock grassland, native kānuka (Kunzea serotina) treeland and indigenous grey shrubland species with an isolated pine tree at the highpoint of the site.*
>
> *The approximately 11ha area of flat to gently sloping terrain is comprised of pasture grass, divided into a series of paddocks by fences and used for farming activities, including stock grazing / seasonal crops. A cluster of exotic poplar / willow trees identifies the intersection of the driveway with Lake Road. Lake Road is a paper road that extends along the northern boundary of the site for approximately 400m before becoming a public no-exit gravel road shared with the access to the farm shed on the site, and direct access between the Roy's Peak track and the Damper Bay Recreation Reserve Boundary via the Millennium Walking Track.*

The description above from the RMM assessment is accurate assessment of the subject site and its existing land use.

Relevant to the consideration of the proposal is the subject sites landscape classification. It is located entirely in the Proposed District Plans (**PDP**) Rural Zone and within an Outstanding Natural Landscape (**ONL**).

Further, the subject site also falls within the PDP's Landscape Priority Area – Mount Alpha ONL 21.22.19 as outlined below.

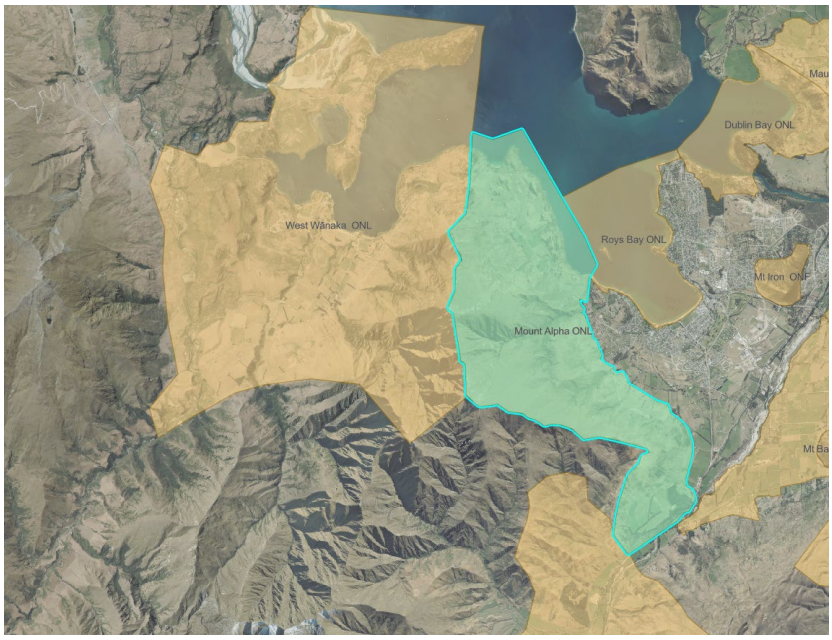

Figure 1. Mount Alpha ONL Landscape Priority Area 21.22.19

In addition to the landscape classification of the subject site, another relevant consideration is its status under the National Policy Statement for Highly Productive Land (**NPS-HL**). Under the NPS-HL a portion of the subject site has a Land Use Capacity (**LUC**) rating of 3 and is classified as highly productive land as illustrated below.

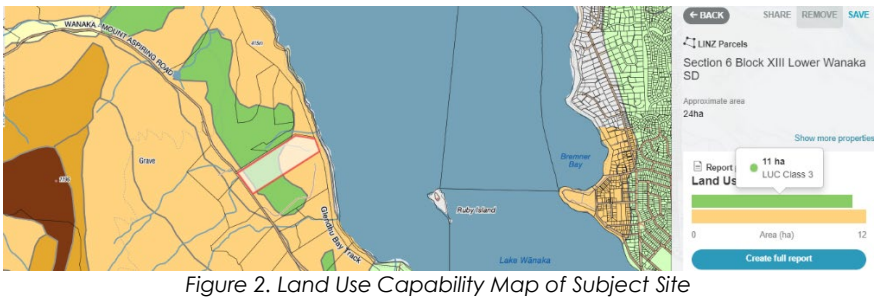

Figure 2. Land Use Capability Map of Subject Site

3.2 Legal Documents

We have reviewed the Record of Title and note that there are no Land Covenants or Consent Notices that require consideration as part of this proposal.

A copy of the Record of Title is contained in **Appendix [B]**.

3.3 Receiving Environment

RMM have also provided a comprehensive description of the receiving environment at Section 4.2 of their landscape assessment.

The receiving environment is one that affords a predominantly productive, pastoral character interspersed with a low density of residential and commercial visitor accommodation.

Specifically, the receiving environment is a combination of landscape features and land uses. The eastern boundary of the site sits approximately 80m from the western shoreline of Roy's Bay, Lake Wanaka. Ruby Island is situated approximately 1.2 kilometres south east of the subject site.

The Damper Bay Lakefront Recreation Reserve is situated between the site's eastern boundary and the shore of Lake Wanaka but at a lower elevation than the existing residential activity. This Recreation Reserve contains the popular Millennium Trail that extends around the western shore of Roy's Bay beneath the subject site and further west to Glendhu Bay.

To the immediate north of the subject site (beyond Lake Road) lies Lots 2 & 3 DP 549904 and Lots 1 & 4 DP 549904. Both properties are held in the same ownership by Apres Demain Limited. Collectively, these landholdings have a total area of 136.95Ha.

These landholdings comprise all that land between the Wanaka-Mt Aspiring Road and the Damper Bay Lakefront Recreation Reserve for 1.3 kilometres north of the subject site. A large residential unit has been constructed on Lot 3 DP 549904 approximately 310m north of the applicants existing residential unit. The remainder of these landholdings are pastoral in nature and used for grazing.

To the immediate south of the subject site is a 29.5Ha rural landholding legally described as Lot 1 Deposited Plan 24014 and owned by Trilane Industries Limited. On 31st October 1996, the Queenstown Lakes District Council granted resource consent RM950951 to Trilane Industries Limited on a non-notified basis following a hearing before the Wanaka Resource Management Hearings Committee on 30 April 1996 and 28 May 1996.

RM950951 authorised the use of the residential dwelling constructed on Lot 1 DP 24014 for a lodge for up to twelve guests at any one time. This is known as Whare Kea Lodge.

Trilane Industries Limited holds rights for the arrival and departure of helicopters from the lawn to the east of the lodge pursuant to Consent Order for RM960392.

This Consent Order provides for the following aircraft movements:

- 500 helicopter flights per annum.
- 35 helicopter flights per week.
- 12 helicopter flights per day.
- Limited to private use of the landowner, and
- Limited to commercial use for guests staying at the lodge.

Similar to the subject site, the flat land between the Wanaka-Mt Aspiring Road is used for productive pastoral purposes. However, Trilane Industries Limited in conjunction with other landowners further to the south, contains the Ruby Island Airstrip. This airstrip is authorised pursuant to resource consent RM160501 to enable the arrival and departure of fixed wing aircraft up to a maximum of four flights per day and 12 flights per week.

Further south of the Trilane Industries Ltd property there is a low density of consented and built residential development located in the undulating topography overlooking Lake Wanaka all the way south to Ruby Island Road and including The Olive Grove Wanaka Wedding Venue.

Immediately west and south west of the subject site are several rural allotments with established residential units. One of these sites, Lot 5 Deposited Plan 303826 owned by the Hogan's also incorporates a part of the Ruby Island Airstrip.

Further to the west and immediately across the Wanaka-Mt Aspiring Road are two properties of 13ha and 16ha in size respectively which are owned by Tuohy's Limited.

The larger block contains an existing residential unit and numerous farm buildings set amongst a significant number of trees.

To the south of these properties lie two 17Ha blocks owned by the Norman's and Kennedy/Morris. The southern-most block located at 449 Wanaka-Mt Aspiring Road contains an existing residential unit. The other block is free of built form and contains no approved residential building platform.

To the south again and encompassing all the land further to the west of the abovementioned properties lies the pastoral farming operation of Alpha Burn Station which ascends the steep slopes of Roy's Peak to approximately 1578masl.

The Department of Conservation administered Roy's Peak walking track and carpark exists approximately 535m north-west of the vehicle crossing into the subject site.

Overall, the receiving environment is one of an Outstanding Natural Landscape framed by the backdrop of mountain peaks and the open natural character of Lake Wanaka.

Situated between the Lake shore and mountain tops is an environment typically pastoral in nature with an established low density rural living environment contained within the lower elevation and rolling topography of the landscape.

4 Resource Management Planning Background

The following describes the resource management history for the subject site:

QLDC Consents

RM990406

RM990406 was an application to erect a dwelling and adjoining accessory buildings on rural land accessed from Mt Aspiring Road, Lake Wanaka.

The issue of notification and affected persons consents was considered pursuant to Section 34 of the Resource Management Act 1991 by the Planning Policy and Consents Committee on 20 October 1999; while the substantive issues of the application were heard by an Independent Commissioner on 14th January 2000, at the applicant's request.

A decision was granted by the Council on 15 February 2000, and this consent has been given effect to, represented by the existing residential unit lived in by the Applicant near the north-east corner of the subject site.

RM000669

RM000669 was a variation to RM990406. Specifically, the application sought to delete conditions 9 and 10 relating to the construction of and subsequent planting of a berm that was intended to mitigate the visual effects of the residential unit on the property to the south owned by Trilane Industries Limited.

The decision was granted by Council on a non-notified basis on 12 January 2001 and included an updated condition 9 relating to the berm construction and required landscaping.

This variation has also been given effect to.

RM020867

RM020867 was an application to construct a new accessory building for use in association with the existing farming use of the property.

The consent was granted by the Council on the 24 January 2003 on a non-notified basis and is illustrated by the existing shed located on the site's northern boundary approximately 4m from the site's boundary with Lake Road.

ORC Consents

Land Use Consent 99531

This was a land use consent granted by the ORC on 02 March 2000 to place a pipe, cable, and submersible pump on the bed of Lake Wanaka, extending up to 30m from the shoreline.

The land use consent has been exercised and it is this pump and Lake Wanaka which is the source and means of supply of potable water to the subject site.

5 Description of the Proposal

5.1 Overview

Resource consent is sought to subdivide the subject site into two Lots. Proposed Lot 1 will comprise a total area of 18.83Ha. Proposed Lot 1 will retain the existing residential unit and shed, the water tanks, the existing driveway, and the flat productive land adjacent to the Wanaka Mt Aspiring Road.

Proposed Lot 2 will comprise a total area of 4.67Ha and will encompass the elevated landform with existing Kanuka located in the eastern and south eastern part of the subject site.

A 1,000m^2 building platform with specific design controls is proposed upon proposed Lot 2.

Earthworks are proposed to create five passing bays on the existing driveway, establish a new access through proposed Lot 2 to the proposed building platform, to establish the building platform at the proposed RL and to develop mitigation bunding.

Indigenous landscape planting is also proposed upon proposed Lot 2 for both landscape mitigation and ecological offset planting due to removal of Kanuka for the driveway and building platform development.

A Right of Way (**ROW**) easement will be imposed over proposed Lot 1 in favour of proposed Lot 2. A right to store water will also be established on proposed Lot 1 over the area of the existing water tank storage in favour of proposed Lot 2. Additional easements will be imposed for power and conveyance of water as part of the subdivision.

Land use consent under the NES Contaminated Soils is sought due to the site having been classed as a HAIL site and the volume of earthworks that are proposed to be undertaken.

The overall details of the proposal are addressed below.

5.2 Proposed Subdivision

As outlined above, consent is sought to subdivide the subject site into two lots. Proposed Lot 1 will comprise a total area of 18.83Ha. Proposed Lot 1 will retain the existing residential unit and shed, the existing driveway and the flat productive land adjacent to the Wanaka Mt Aspiring Road.

Proposed Lot 2 will comprise a total area of 4.67Ha and will encompass the elevated landform with existing Kanuka located in the eastern and south eastern part of the subject site.

Both proposed lots will be irregular in shape. The irregular shape has arisen due to the proposal's intentions to subdivide the elevated and vegetated and therefore unproductive land from the existing residential activity and the flat productive land adjacent to the Wanaka Mt Aspiring Road.

The western boundary of proposed Lot 2 follows the delineation of the LUC 3 productive land from the LUC 6 land that forms the eastern part of the site.

Easements are proposed over proposed Lot 1 in favour of proposed Lot 2 for a ROW and for the storage of water (at the location of the existing water tanks). Additional easements will be required for power and conveyance of water and will be imposed through the subdivision consent conditions.

The subdivision is illustrated on the proposed scheme plan prepared by Southern Land and contained in **Appendix [C]**.

5.3 Proposed Building Platform

The proposed building platform is rectangular in shape and has a total area of 1,000m^2. It is located toward the north eastern part of the irregularly shaped proposed Lot 2.

The proposed building platform is located part way up the elevated landform which will comprise proposed Lot 2 and is proposed to be developed at an RL of 347.40m.

The proposed building platform will have a north west aspect and measure 45m x 22.22m. A maximum building height of 5.5m above the RL 347.40m is to be imposed.

The proposed building platform will exceed the minimum internal setback requirements of the PDP with the closest boundaries of proposed Lot 2 lying 42.29m to the east and 56.53m to the north.

The location of the proposed building platform, its RL level, and dimensions are illustrated on the proposed scheme plan and earthworks plans prepared by Southern Land and attached as **Appendix [C]** and **[D],** respectively.

5.4 Proposed Access

As noted above, there is an existing vehicle crossing from the subject site onto Wanaka Mt Aspiring Road in the north western corner of the site. This connects to a 900m long single lane gravel driveway.

The existing vehicle crossing is proposed to be upgraded to achieve the standard outlined in Diagram 8 - Access Design, from the QLDC PDP Transport chapter.

The existing driveway will be upgraded to provide passing bays every 100m. Specifically, it will comprise a 2.5m carriageway with 0.25m shoulders on a basecourse of 150mm AP40 gravel.

The passing bays will provide an additional 2m width for a length of 9.0m with a 5.5m long taper at each end. This will afford a total lane width of 4.5m at each passing bay.

Approximately 550m from the vehicle crossing onto Wanaka Mt Aspiring Road a new access is to be constructed to the proposed building platform on proposed Lot 2.

The proposed new access has been designed with grades from 5% - 16.67%, a 2.5m carriageway with 0.25m shoulders on a basecourse of 150mm AP40 gravel. Two passing bays of the same dimensions described above are proposed on the two 'straights' of this driveway.

The proposed improvements to the existing vehicle crossing and driveway and the proposed new access to propose Lot 2 are illustrated on the earthwork's plans prepared by Southern Land and contained in **Appendix [D]**.

5.5 Proposed Infrastructure Services

The applicant engaged Southern Land to prepare an infrastructure report as part of the application. A copy of this assessment is contained in **Appendix [E]**.

Power

As identified in the Southern Land infrastructure assessment, the existing residential unit is supplied by a power cable in the driveway which runs to a transformer located 20m west of the existing residential unit.

The Southern Land assessment considers that the transformer will likely have capacity to provide an electricity supply to the building platform on proposed Lot 2 and this will be confirmed at detailed design / engineering acceptance.

Aurora Energy have confirmed that a point of supply can be made for the proposed development and their letter of confirmation is attached to the Southern Land report.

Telecommunications

As identified in the Southern Land infrastructure assessment, the existing residential unit has an existing copper telecommunications connection.

Chorus has confirmed that they can provide a fibre connection to proposed Lot 2, but the costs will be in excess of $100,000 + gst. A copy of their letter is contained in Appendix [D] of the Southern Land infrastructure report.

As the estimate of costs from Chorus is deemed cost prohibitive, it is proposed that wireless internet/satellite-based telecommunications service providers will be used to service a new residential unit on proposed Lot 2.

It is volunteered that a condition of consent be imposed on the Council's decision requiring that a Consent Notice be registered on the Record of Title advising that no telecommunication services have been installed to proposed Lot 2 and that future landowners must either arrange such install themselves or use a satellite/wireless-based service.

Potable Water

There is no Council reticulated services for potable water adjacent to the subject site.

As identified in Section 4.0 above, land use consent was granted by the ORC for the placement of a pipe, cable, and submersible pump on the bed of Lake Wanaka. The pipe rises through the Damper Bay Recreation Reserve via existing Easements A & B DP 431125, it then crosses the corner of Lake Road and enters the site in the northeast corner of the site. Once in the subject site, the pipe rises to two existing 30,000l water tanks at the end of the ridge and adjacent to the eastern boundary of proposed Lot 2.

Under Rule 12.1.2.2 of the Regional Plan: Water, it is a Permitted Activity to take 1,000,000L/day of water from Lake Wanaka.

Accordingly, this existing water supply infrastructure and the Permitted Activity abstraction limits of the Regional Plan: Water will supply potable water to both proposed Lot 1 and Lot 2.

Firefighting

As noted above, water will be supplied to the existing water tanks contained within proposed Easement area 'C.' The two tanks have a combined volume of 60,000L.

The Southern Land infrastructure report notes that the firefighting requirements for a residential unit on proposed Lots 1 and 2 will fall under FW2 SNZ 4509:2008, which requires 45,000l of static water storage for firefighting. They note that this volume can service up to two hydrants.

They suggest that a solution for the proposed building platform would be to provide a hydrant near the house with a hardstand area at the top of the driveway, this would comply with SNZ 4509:2008. Alternatively, the future dwelling on the building platform could be serviced by a sprinkler system.

It is volunteered that a Consent Notice be imposed that any future dwelling must cater for firefighting provisions in accordance with SNZ 4509:2008.

Stormwater

Stormwater from the driveways will be captured in roadside swales, and culverts will be installed along the driveway as required to maintain natural run-off water courses. Culvert sizing and location will be determined as part of the detailed design, post consent.

The stormwater run-off from built form within the proposed building platform will be handled by a soak pit. The geotechnical report prepared for this application has specific recommendations as the soakage rate is low due to shallow rock.

It is volunteered that a Consent Notice be imposed on proposed Lot 2 that stormwater discharge to soak pit is designed in accordance with the recommendations of the GeoSolve geotechnical assessment provided in this application.

Wastewater

The existing residential unit is serviced by an on-site disposal system comprising a septic tank and disposal field. These services will continue to be contained entirely within the boundaries of proposed Lot 1.

As no reticulated wastewater exists adjacent to the subject site, it is proposed that wastewater from a future residential unit on proposed Lot 2 will also be discharged on-site.

The geotechnical and soakage assessment prepared by GeoSolve found that the soils are classified as Class 4, Massive. Their report contains a QLDC site and soils assessment.

It is volunteered that a Consent Notice be imposed on proposed Lot 2 requiring that the detailed design of the wastewater disposal system be prepared and approved at the time of construction of a residential unit in accordance with AS/NZS 1547:2012, and the recommendations of the GeoSolve report.

5.6 Proposed Earthworks

The earthworks proposed in this application relate to the development of passing bays on the existing driveway, the construction of the new access to proposed Lot 2, the creation of the building platform and two mounds (A and B) for landscape mitigation purposes.

The Southern Land earthworks plans in **Appendix [D]** illustrate that 2,150m^3 of cut is proposed with 2,150m^3 of fill, over a total area of 4,400m^2.

The earthworks will require a maximum cut of 3.0m at the south eastern corner of the proposed building platform and a maximum fill depth of 3.1m at the northern side of the proposed building platform.

The earthworks have been designed by Southern Land in accordance with the recommendations of a geotechnical and soakage investigation carried out by GeoSolve. A copy of the Geosolve assessment is attached as **Appendix [F].**

In regard to erosion and sediment controls, Southern Land identify in their infrastructure report that the proposed earthworks are 'Low Risk' in accordance with Council's guidelines and they have provided a short form EMP and a plan of erosion and sediment controls at pages 12, 13, and 43 – 49 of their report at **Appendix [E]**.

The earthworks will trigger a requirement for 'residential earthworks' under the provisions of the Otago Regional Plan: Water as the area of work exceeds 2,500m^2. This consent has not been sought at the current time and will be sought following the grant of this application made to QLDC. It is more efficient and less of a risk to the applicant in terms of time and money, to apply for the necessary residential earthworks consent following the decision on this application.

5.7 Proposed Indigenous Vegetation Clearance

As identified above, proposed Lot 2 is located on an elevated part of the subject site which in part, contains a kānuka (*Kunzea serotina*) dominant treeland.

To develop access to the proposed building platform on proposed Lot 2, a ten-metre-wide zone of clearance is required along the driveway to take account of the earthworks cut and fill batters and carriageway formation.

Additionally, a 30m exclusion zone for flammable vegetation is required around the proposed building platform to comply with FENZ guidelines for mitigation of fire risk.

An ecological assessment of the proposed development by Beale Consultants has confirmed that this requires the removal of the following indigenous vegetation:

- 179 kanuka trees,
- 45 matagouri (*Discaria toumatou*) shrubs,
- 2 porcupine (*Melicytus alpinus)* shrubs
- 1 mingimingi (*Coprosma propinqua*) shrub, and
- 2 rohutu (*Lophomrytus obcordata*) shrubs.

A biodiversity offset is proposed as part of the proposal to address the residual loss of indigenous trees and shrubs as detailed above and to achieve a net gain in indigenous biodiversity within proposed Lot 2.

The offset actions will be twofold:

- replacement of the same number of trees and shrubs lost during site development; and

- establishment of a diverse assemblage of indigenous plant species that formed part of the prehuman vegetation community that existed in this area.

Figure 11 on page 15 of the Beale Consultants ecological report identifies the area (3,500m^2) and species of offset planting on proposed Lot 2.

A lizard survey was also conducted by Dr Tocher of Lizard Expert NZ on 24th January 2024 which detected a depleted population of McCann's skinks (Oligosoma maccanni) on the property. The extensive rank grass cover, with occasional slash piles provides suitable habitat for McCann's skink, as reported by Dr Tocher. The rank grass and kānuka slash occurs within the curtilage area and near to the building platform. McCann's skink has a national threat classification ranking of Not Threatened.

The results of the lizard survey are contained in Appendix 1 of the Beale Consultants ecological report.

It is noted that the disturbance of lizards will require the development of a lizard management plan, and a Wildlife Act Authority issued from the Department of Conservation pursuant to the Wildlife Act 1953.

This Lizard Management Plan is currently in development and will be submitted to the Department of Conservation during the processing of this resource consent application. Accordingly, the following condition of consent is proposed:

> Prior to the commencement of any works onsite, the consent holder shall *provide to the Planning Manager, Queenstown Lakes District Council, a copy of a Wildlife Act Authority granted by the Department of Conservation pursuant to the Wildlife Act 1953. The consent holder must comply with the requirements of the Wildlife Act Authority at all times.*

A copy of the Beale Consultants ecological assessment is attached as **Appendix [G]** and it is volunteered that all works be undertaken in accordance with the recommendations contained in this assessment.

5.8 Contaminated Soils Investigations

The applicant engaged Insight Engineering to undertake a preliminary site investigation (**PSI**) of the subject site and the proposed residential building platform. A copy of the PSI is contained in **Appendix [H]**.

The subject site is identified as a HAIL site as the following activities on the MFE HAIL list were identified:

- Category A1 - Agrichemicals including commercial premises used by spray contractors for filling, storing, or washing out tanks for agrichemical application.

This category is represented by the annual application of fertiliser to the western portion of the site. Although regular fertiliser application can result in an accumulation of cadmium in the near surface soil, the rate of application required to result in significant contamination impacts is not considered to have been applied to the site. The risk to human health from this source is therefore considered to be very low.

- Category A6 – Fertiliser manufacture or bulk storage.

This category is represented by the storage of fertiliser in the shed. The risk to human health from this source is very low.

- Category A11 - Pest control including the premises of commercial pest control operators or any authorities that carry out pest control where bulk storage or preparation of pesticide occurs, including preparation of poisoned baits or filling or washing of tanks for pesticide application.

This category is represented by the use of 1080, Pindone and Magtoxin to control rabbits at the site. The risk to human health from this source is very low.

- Category A13 - Petroleum or petrochemical industries including a petroleum depot, terminal, blending plant or refinery, or facilities for recovery, reprocessing or recycling petroleum-based materials, or bulk storage of petroleum or petrochemicals above or below ground.

This category is represented by the above ground petrol and diesel tank located on the northern side of the shed. The risk to human health from this source is considered to be very low.

- Category G5 - Waste disposal to land (excluding where biosolids have been used as soil conditioners).

This category is represented by the farm tip, which was covered with approximately 0.15m of topsoil during 2023 and is not considered likely to pose a significant risk to human health if the area remains undisturbed.

Insight Engineering recommend that the subdivision and use of land for residential activity be authorised as a Permitted Activity under Regulation 8(4) and that the earthworks be authorised as a Discretionary Activity pursuant to Regulation 11.

They also have two recommendations which it is volunteered should be included as conditions of consent.

The first is that if any material that shows signs of significant contamination (visual or olfactory indicators such as chemical odours or abnormal stains) is unearthed on the site during the development, work should stop immediately, and a suitably qualified environmental practitioner should be engaged to assess the risk to human health prior to recommencing earthworks.

The second, should be imposed as a Consent Notice condition and is that if the former farm tip area is proposed to be disturbed in the future, a contaminated site management plan (CSMP) and / or a remediation action plan (RAP) could be required to control the potential fugitive releases from the former tip area. Under those circumstances, Consent may also be required from ORC according to the requirements of the Regional Plan: Waste for Otago.

5.9 Landscape Controls and Assessment

The applicant has engaged Rough Milne Mitchell (RMM) landscape architects to undertake a landscape assessment and preparation of a structural landscape plan. A copy of these documents is contained in **Appendix [I].**

In addition to the 1,000m^2 building platform, RMM have also identified a 1,044m^2 curtilage area around the proposed building platform.

The landscape mitigation planting recommended by RMM is additional to the 3,500m^2 area of biodiversity offset planting and is proposed to occur as a 900m^2

extension to existing vegetation on and over part of the two proposed mounds to maintain the patchy mosaic of planting that exists on the site. An additional 500m^2 area of mountain beech (*Fucospora cliffiortioides*) is also proposed.

It is volunteered that conditions be imposed requiring all planting for biodiversity off-set and landscape mitigation to be fully implemented in accordance with the RMM plan, plant schedules and the following planting specifications, prior to issue of the S224 certificate and thereafter be maintained and irrigated in accordance with the following requirements.

- Identified beech trees within Lot 2 shall be planted at 0.75m tall. All remaining identified beech trees shall be planted at 0.75m tall.

- All shrubs will be planted at a root trainer (RT) grade or larger.

- All plants shall be planted with a slow-release fertiliser.

- All plants shall be mulched with bark mulch to at least a 200mm radius of mulch material installed to retain moisture.

- All plants shall have pest protection sleeves installed.

- A temporary irrigation system shall be installed and operated for the first five years from the date of planting.

- All trees shall be staked with a minimum of three stakes.

- If any tree or plant shall die or become diseased it shall be replaced within 12 months as per the approved landscape plan.

- Identified planting within the site will be maintained to prevent wilding species establishing and exclude wilding species - (Lodgepole Pine -Pinus contorta, Black Pine - *P.nigra*, Scots Pine - *P.sylvestris*, Maritime Pine - P. pinaster, Monterey Pine - P. radiata, European Larch - Larix decidua, Douglas Fir – *Psuedotsuga menziesii*, Sycamore - Acer *psudoplatanus*, Common Hawthorn -Crataegus monogyna) and problematic species such as birch, gorse, or elderberry.

It is volunteered that the last two bullet points above be imposed as a Consent Notice over proposed Lot 2 to ensure the on-going maintenance of the planted areas.

The expert landscape design control recommendations of RMM include:

- Building height of no more than 5.5m.

- The external cladding of any built form will be in accordance with PDP Rule 21.7.2, and QLDC's 'A Guide to Suitable Building Colours and Materials in Rural Zones.'

- All domestic landscaping and structures, including but not limited to clotheslines, outdoor seating areas, external lighting, spas, play structures, vehicle parking, pergolas, and formal or amenity gardens and lawns shall be confined to the residential curtilage area.

- All future external lighting will be down lighting only and will not be used to highlight buildings or landscape features visible from beyond Lot 2. External lighting will be located within the building platform area only. All exterior lighting attached to buildings, will be at a height no greater than 2.0m above the ground, and as such will not create light spill beyond the boundaries of the lot. Any external lighting not attached to buildings will be no more than 1.2m in height above ground level. External lighting will be of a low luminosity and excludes the use of flood lighting or similar.

- Accessways will be finished with a local gravel or chip seal surface and will exclude the use concrete kerb and channels.

- Vehicle entranceway structures will be of a standard farm gate design to a height of no more than 1.2m and constructed of natural materials such as unpainted timber or stone to not be visually obtrusive (monumental) and consistent with traditional rural gateways.

The above design controls are volunteered to be imposed as Consent Notice conditions over proposed Lot 2.

5.10 Highly Productive Land

As outlined in Figure 2 in Section 2.0 of this application, the proposal involves subdivision and a very minor amount of earthworks within an area of land contained in the LUC 3 classification and therefore deemed to be highly productive land.

Compass Agribusiness have prepared an assessment of the effects of the proposal on the overall productivity of the subject site.

Their assessment is contained in **Appendix [J]** and concludes that the subject site has obtained a substantial increase in potential productivity from historical investment in irrigation and that the proposed subdivision and development would have a "miniscule" impact on the productive land area and overall productivity of the site.

5.10 Affected Persons Approval(s)

No persons have been identified as affected persons to the proposal.

6 Statutory Considerations

6.1 Operative District Plan

The Queenstown Lakes District Council has been reviewing its District Plan in Stages since August 2015.

In accordance with Section 86F of the RMA, a rule in a proposed plan must be treated as operative (and any previous rule as inoperative) if the time for making submissions or lodging appeals on the rule has expired and, in relation to the rule,

(a) no submissions in opposition have been made or appeals have been lodged; or

(b) all submissions in opposition and appeals have been determined; or

(c) all submissions in opposition have been withdrawn and all appeals withdrawn or dismissed.

In this case, it is considered that all the relevant rules and standards in the Proposed District Plan can be treated as operative as they are no longer subject to appeal.

Accordingly, the proposal does not trigger resource consent under the Operative District Plan.

6.2 Proposed District Plan

Under the Proposed District Plan the proposal requires the following consents:

- A **Discretionary Activity Consent** pursuant to Rule 27.5.6 for subdivision which does not fall within any rule in Section 27.5 of the PDP. Subdivision in the Rural Zone is not specifically addressed by any other Rule in Section 27.5 of the PDP.

- A **Discretionary Activity Consent** pursuant to Rule 21.4.10 for the identification of a building platform not less than 70m^2 and no greater than 1,000m^2 in area.

- A **Restricted Discretionary Activity Consent** for earthworks that do not comply with the Standard 25.5.6 in Table 25.2 for the maximum total volume. 1,000m^3 is permitted and 4,300m^3 is proposed.

- A **Restricted Discretionary Activity Consent** pursuant to Standard 25.511.1 for earthworks where more than 2,500m^2 of earthworks is proposed where the slope of the site is greater than 10 degrees.

- A **Restricted Discretionary Activity Consent** pursuant to Standard 25.5.15.1 whereby the maximum depth of cut of 2.4m will be exceeded. A maximum cut height of 3.0m is proposed.

- A **Restricted Discretionary Activity Consent** pursuant to Standard 25.5.16.1 whereby the maximum depth of fill will exceed 2.0m. A maximum fill depth of 3.1m is proposed.

- A **Restricted Discretionary Activity Consent** pursuant to Standard 33.5.2 whereby the proposal is located in a land environment with less than 20% indigenous vegetation cover remaining as defined by Threatened Environment Classification (TEC) version 2012. A total of approximately 2,200m^2 of indigenous vegetation is proposed to be removed for the new driveway and 30m fire exclusion area.

6.3 Otago Regional Plan: Water

Under the provisions of the Otago Regional Plan Water, the proposal will require the following resource consents:

- A **Restricted Discretionary Activity Consent** pursuant to Rule 14.5.2.1 for residential earthworks whereby the earthworks necessary to establish a residential access, the building platform, landscaping, and associated services will exceed a total area of 2,500m^2.

This consent has not been sought at the time of lodging this application. It is proposed that it will be obtained once consent has been obtained from the Queenstown Lakes District Council.

6.4 NES Contaminated Soils Regulations

All applications for resource consent need to be determined if they apply under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health ("NES").

The expert PSI prepared by Insight Engineering confirms that the application site is considered a HAIL site.

Insight Engineering recommended that the subdivision, development, and use of the land for residential purposes be allowed as a Permitted Activity under the NES, because the requirements of Regulation 8(4) have been met.

Regarding the earthworks associated with the development, Insight Engineering recommend that the earthworks are allowed as a Discretionary Activity under Regulation 11 of the NES due to the low likelihood of contamination impacts being present, unless disturbance of the historical farm tip area is required.

Overall, a Discretionary Activity Consent is required under these regulations.

6.5 Overall Status

The overall status of the proposal is that of a **Discretionary Activity**.

7 Assessment of Effects

In accordance with Section 88 and Schedule 4 of the Act an assessment is made of any actual and potential effects on the environment that may arise from the proposal is required with any details of how any adverse effects may be avoided, remedied, or mitigated. Accordingly, below is an assessment of effects relative to the scale and significance of the proposed activity.

The assessment of effects has addressed the following categories:

- Permitted Baseline.
- Effects of the Proposed Subdivision.
- Effects of Infrastructure Servicing.
- Effects of Earthworks.
- Effects of Contaminated Soils.
- Effects on Traffic.
- Effects on Ecological Biodiversity.
- Effects on Highly Productive Soils.
- Effects on Landscape Values.
- Cumulative Effects.
- Precedent Effects.
- Positive Effects.

7.1 Permitted Baseline

Sections 95D(b), 95E(2)(a) and 104(2) of the Act provide discretion to Council (for the purposes of forming an opinion as to the actual or potential effects) to disregard any adverse effects of the proposal on the environment (or on a person) if a District Plan or National Environmental Standard permits an activity with that effect.

If the permitted baseline is applied, it is only the effects over and above those which form part of the permitted baseline which must be considered by the Council. The application of the permitted baseline is a discretionary consideration by the Council.

In combination to considering the permitted baseline, for the purposes of the Section 104(1)(a) assessment under the Act, consideration must be given to the 'environment' of the site. The environment for the site includes the following:

- The current lawful state of the site at the time a resource consent application is considered by the Council; and

- The future state of the site as it might be modified by the utilisation of rights to carry out permitted activities (and non-fanciful activities) allowed under a plan; and

- The future state of the site if 'live' resource consents are implemented where it is likely that such consents will be implemented.

The current lawful state of the site has been described in Section 2.0 of this application.

In terms of the future state of the site there are no resource consents registered against the subject site that are likely to be implemented in the future.

There are several Permitted Activities that could occur on the subject site including:

- Earthworks (as a standalone activity not associated with buildings) up to 1,000m^3 in volume, 2.4m in height, 2m in depth, 2,500m^2 in area where the slope is 10° or greater, 10,000m^2 where the slope is less than 10° and where no more than 300m^3 of clean fill is transported to and from the subject site.

- The exterior alteration of any lawfully established building where there is not an approved building platform on the site, subject to compliance with the Standards in Table 2 and Table 4 of Chapter 21 of the PDP including that the ground floor area shall not increase more than 30% in a ten-year period.

- Home occupation that complies with the Standards in Table 6 of Chapter 21.

- Farming activities such as the grazing of sheep and cattle and production of vegetative matter including associated cultivation, which comply with the Standards in Table 2 and 3 of Chapter 21 of the PDP.

- Landscaping/ecological enhancement planting provided that the tree species listed in Table 1 of Chapter 34 – Wilding Exotic Trees of the PDP is not undertaken.

- Removal of any of the existing non-indigenous landscaping on the site not tied to the resource consents approved by QLDC for the construction of the residential unit and shed.

- Clearance of up to 500m^2 of indigenous vegetation.

While there are a range of permitted activities that could be undertaken on the subject site, it is considered that the only activities of relevance are the removal of up to 500m^2 of indigenous vegetation, removal of non-indigenous vegetation, planting /ecological enhancement of the site and up to 1,000m^3 of earthworks.

Of note is that there are no permitted subdivision activities and there are no permitted activities for the identification of a residential building platform.

Accordingly, given the consenting requirements outlined in Section 6.0, the Permitted Baseline has limited relevance to this proposal.

7.2 Alternative locations or methods

The proposed activity will not result in any significant adverse effects on the environment. Accordingly, an assessment of alternative locations is not necessary.

7.3 Assessment of the actual and potential effects

The following areas of consideration apply in terms of assessing the actual and potential effects on the environment.

- Effects of the Proposed Subdivision.
- Effects of Infrastructure Servicing.
- Effects of Earthworks.
- Effects of Contaminated Soils.
- Effects on Traffic.
- Effects on Ecological Biodiversity.
- Effects on Highly Productive Soils.
- Effects on Landscape Values.
- Cumulative Effects.
- Precedent Effects.
- Positive Effects.

7.3.1 Effects of the Proposed Subdivision.

The creation of a new allotment on a plan has, in itself, no real direct effect on the environment. However, the control of subdivision, particularly in respect of allotment sizes, and configuration are tools which assist in controlling the adverse effects of the land use that follows thereby promoting sustainable management.

In this case, the proposed lot sizes will maintain the productive capacity of the existing landholding as will be discussed in more detail below regarding the NPS-HL.

The proposed subdivision has been designed to subdivide off the least productive, elevated part of the subject site which is only grazed 2 – 3 times per year by cattle to keep the vegetation tidy.

Accordingly, the proposed boundaries, particularly when viewed from Wanaka Mt Aspiring Road and Lake Road will run along the lower contour of the hill landform and demarcate the flat productive land (LUC 3) from the elevated and drier hill slope that is unproductive (LUC 6).

This is not considered to result in any arbitrary or uncharacteristic boundary fencing. The remaining boundaries and associated fencing will internalise the potential visual effect to proposed Lot 1 as they will not be discernible from outside of the subject site.

No additional vehicle crossings are proposed and the new driveway for proposed Lot 2 will not be discernible from public places due to its positioning within the existing Kanuka and being approximately 550m from Wanaka Mt Aspiring Road. Accordingly, it will be difficult to ascertain any change in density, land use and character, from the subdivision alone.

Accordingly, it is considered that the subdivision will have less than minor effects on the environment.

7.3.2 Effects of Earthworks

The proposed earthworks have the potential for adverse effects regarding geotechnical stability and undesirable discharges through improper environmental management.

Regarding geotechnical stability, Geosolve have undertaken an assessment of the proposed residential building platform and earthworks on proposed Lot 2. Their expert advice is that there are no mapped existing slope stability hazards present within the building platform area and no evidence of slope instability was observed during the site investigation.

There are no alluvial fan hazards or risks of liquefaction. No groundwater was encountered during test pitting and the water level is expected to be well below the RL for the building platform based on nearby bore hole data.

Based on their assessment of the ground conditions encountered during test pitting, recommendations for earthworks construction and general geotechnical suitability recommendations for the building platform were provided.

Southern Land have developed the earthworks on the subject site in accordance with the recommendations from Geosolve and therefore, they are feasible and without risk of any potential instability.

The Geosolve report notes that it informs preliminary structural design requirements. And that further geotechnical review and assessment is recommended at building consent and design stage of any future residential unit.

Based on the expert advice from Geosolve and adherence to their design recommendations for earthworks, it is considered that, subject to a Consent Notice being imposed on proposed Lot 2, all building works are to be undertaken in accordance with the Geosolve report, and the potential adverse effects on stability will be less than minor.

In regard to the environmental management of earthworks, Southern Land have included at Appendix E of their report a detailed short form EMP and the earthworks plans in **Appendix [D]** include an Erosion and Sediment Control Plan illustrating the location of clean water diversions, temporary run off diversion points to the paddocks and use of an existing grassed swale with silt fence or mulch weirs to intercept sediment.

Permanent restoration of exposed surfaces with vegetation (grass and landscaping) is proposed as soon as possible upon completion of the earthworks.

In addition to implementing all controls outlined within this EMP and Erosion and Sediment Control Plan, additional comfort in the suitably of the sites environmental management can be taken from the fact that a Regional Council consent will be required for these works as well.

It is volunteered that a condition be imposed on the Council's decision requiring the provision of the ORC land use consent and discharge permit decisions for residential earthworks to be submitted to the Planning Manager, prior to any earthworks commencing on site and that all works are to be undertaken in accordance with that decision. It should be stated in the condition that where there is any conflict in the erosion and sediment controls between the QLDC and ORC decisions, the more conservative controls will prevail.

Overall, subject to implementation of the EMP and erosion and sediment controls and imposing the volunteered conditions above, the effects of earthworks are less than minor.

7.3.4 Effects of Contaminated Soils.

As identified in Section 5.0, Insight Engineering have undertaken a preliminary site investigation.

The PSI notes that the subject site is deemed to be a HAIL site due to the annual application of fertiliser, storage of fertiliser on site, pest control use of 1080, Pinedone, and Magtoxin, above ground storage of petrol and diesel, and waste disposal to land which is represented by a small farm tip.

Regarding all sources of contamination except the farm tip, the Insight Engineering assessment concludes that the risk to human health from the identified sources is very low.

Regarding the farm tip, the applicant advised Insight Engineering that an excavator was used to take everything out of the pit. The base of the pit was approximately 500mm to 900mm below the surrounding ground level, due to the gently sloping ground. Anything non-natural was hand-picked from the excavated soil. The excavated soil, which totalled approximately 7m^3, was then placed back into the pit and compacted. Then 150mm of topsoil from elsewhere on the site was placed over the pit and grass was sown.

Insight Engineering find that the presence of the farm tip, covered with approximately 150mm of compacted hardfill, may pose a risk to human health under certain circumstances. Given the potential contamination impacts have not been quantified in the soil within the former farm tip, negative health impacts may result if vegetables grown in that area are consumed regularly by the site occupiers over multiple decades.

As the historic farm tip is not located within the proposed building platform or curtilage area, it is noted in the PSI that no evidence of significant potential for soil contamination impacts to pose a significant risk to human health within the proposed development area.

Although not relevant to managing an effect of this application, if the former farm tip area is proposed to be disturbed in the future, Insight Engineering advise that a contaminated site management plan (CSMP) and / or a remediation action plan (RAP) could be required to control the potential fugitive releases from the former tip area. Under those circumstances, Consent may also be required from ORC according to the requirements of the Regional Plan: Waste for Otago. A Consent Notice condition has been volunteered on proposed Lot 2 to advise future owners of this requirement.

Considering the expert advice from Insight Engineering and the volunteered Consent Notice condition, the effects of contaminated soils are less than minor.

7.3.5 Effects on Traffic.

The proposed subdivision and future residential activity on proposed Lot 2 are not considered to result in any significant effects on traffic generation and safety and efficiency of the road network.

As noted above, no additional vehicle crossings are proposed onto Wanaka Mt Aspiring Road. The existing vehicle crossing will be upgraded to meet Council's current standards which will be a minor positive effect.

The existing driveway into the subject site is suitable for two Lots with introduction of passing bays every 100m. These have been included as illustrated on the Southern Land plans in **Appendix [C]**.

A Right of Way Easement is proposed over Lot 1 in favour of proposed Lot 2 thus ensuring legal access is provided to Wanaka Mt Aspiring Road for both proposed Lots.

The new access to proposed Lot 2 has been designed to achieve Council standards as outlined in the Code of Practice and includes appropriate gradients, widths and formation and includes two passing bays.

Based on review of the expert design of the access upgrades and proposed construction by Southern Land, it is considered that the proposal for access within

the subject site will operate efficiently and effectively and have less than minor effects.

In terms of the safety and efficiency of the adjacent road network (Wanaka Mt Aspiring Road), it is considered that the additional traffic generation from a single future residential unit will not adversely affect the functioning of this road.

Specifically, a residential activity is typically expected to generate approximately eight vehicle movements per day. This will be an insignificant cumulative effect to the existing level of traffic movements on Wanaka Mt Aspiring Road such that this increase would be imperceptible.

In addition to the proposed upgraded vehicle crossing, there are excellent sightline distances in both directions. Further, the closest vehicle crossings are located approximately 80m from the vehicle crossing to the subject site meaning there is unlikely to be conflict from vehicles entering and exiting adjacent properties.

Importantly, the temporary effects of traffic generation during construction to give effect to the proposal are insignificant. This is primarily because no earthworks need to leave the site in heavy vehicles as Southern Land have designed the earthworks as a balanced cut and fill exercise.

Accordingly, it is considered that the potential adverse effects of the proposal on the safety and efficiency of Wanaka Mt Aspiring Road will be less than minor.

7.3.6 Effects on Ecological Biodiversity

As identified above, Beale Consultants have undertaken an ecological assessment of the subject site and proposed development area for residential activity on proposed Lot 2.

Proposed Lot 2 contains a kānuka (Kunzea serotina) dominant treeland which will be affected by the new driveway, building platform and mitigation mounding. Beale Consultants have determined that the affected kānuka treeland is assessed as being of moderate ecological value owing to the presence of species with threat rankings, i.e., kanuka, rohutu and matagouri. The threat rankings are precautionary and do not reflect the relative abundance of kanuka, rohutu and matagouri in the Wanaka Ecological District.

Considering the kanuka treeland in accordance with the criteria set out in Appendix 1 of the National Policy Statement for Indigenous Biodiversity (NPS-IB) the affected kānuka treeland is of ecological significance as the rarity/distinctiveness criterion is triggered due to the threat rankings outlined above.

A lizard survey was also conducted by Dr Tocher of Lizard Expert NZ on 24th January 2024 which detected a depleted population of McCann's skinks

(Oligosoma maccanni) on the property. The extensive rank grass cover, with occasional slash piles provides suitable habitat for McCann's skink, as reported by Dr Tocher. The rank grass and kānuka slash occurs within the proposed curtilage area and near to the building platform. McCann's skink has a national threat classification ranking of Not Threatened.

To develop access to the proposed building platform on proposed Lot 2, a ten-metre-wide zone of clearance is required along the driveway to take account of the earthworks cut and fill batters and carriageway formation.

Additionally, a 30m exclusion zone for flammable vegetation is required around the proposed building platform to comply with FENZ guidelines for mitigation of fire risk.

The Beale Consultants assessment has confirmed that this will require removal of the following indigenous vegetation:

- 179 kanuka trees,
- 45 matagouri (Discaria toumatou) shrubs,
- 2 porcupine (Melicytus alpinus) shrubs
- 1 mingimingi (Coprosma propinqua) shrub, and
- 2 rohutu (Lophomrytus obcordata) shrubs.

The magnitude of ecological effect of the removal of this vegetation and associated habitats is assessed as moderate by Beale Consultants in accordance with the EIANZ Guidelines.

Regarding avifauna, Beale Consultants advise that the magnitude and level of ecological effects on Kārearea is assessed as negligible owing to a localised change to the baseline condition of an area of vegetation cover that forms a very small part of the home range of this species.

Dr Tocher states that McCann's skink (which have a ranking of Not-Threatened) will be affected by the proposed development owing to the suitability of grassland habitat that exists in the affected area. The existence of suitable habitat indicates that death or injury to McCann's skinks will occur during the earthworks and from vehicle movements.

Based on the expert assessments of Beale Consultants and Dr Tocher, the potential ecological effects without mitigation, are more than minor.

Beale Consultants have had regard to the effects management hierarchy and the following effect management measures (as outlined in Sections 10 and 11 of their report) are proposed:

Avoidance Measures

- Avoiding rock habitat that supports lizards and implementing setbacks or no disturbance zones.

- Avoiding on-site quarrying of rock for road metal.

- Importing gravel required for construction from a weed free source.

Mitigation Measures

- Requiring all works associated with construction activities along with storage, laydown, and parking areas to take place within a clearly defined construction zone.

- Clearly defining accessways for construction machinery and vehicles.

- Undertaking development only within those areas illustrated on the relevant plans lodged with the resource consent application.

- Installing underground services within the development footprint.

- Development of a Lizard Management Plan and obtaining of a Wildlife Authority from DOC pursuant to the Wildlife Act 1953. This may require capture and relocation of the lizards.

Biodiversity Offset

- Implementing a biodiversity offset to address the loss of indigenous trees and shrubs within the FENZ fire exclusion zone and along the driveway.

  The proposed offset site encompasses areas of grassland bordering kanuka treeland with a collective area of approximately 3,500m^2 .

Section 11 of the Beale Consultants report comprehensively details the ecological offset actions in terms of plant species/numbers to be planted, implementation of an aftercare management and monitoring regime, on-going control of broadleaved weeds.

Beale Consultants confirm that the feasibility of delivering the proposed ecological offset planting and having it naturally regenerating by year 10, is high.

The value of the ecological offset has been critically tested using a biodiversity offsets accounting model. As outlined in the model (Appendix 2 of the Beale Consultants report), show positive net present values for the two biodiversity attributes of canopy and diversity, indicating the proposed offset actions will result in a net biodiversity gain over a ten-year period.

Considering the effects management hierarchy and actions proposed above on the expert advice of Beale Consultants and Dr Tocher, the proposed development will have minor adverse effects on ecological biodiversity.

7.1.7 Effects on Highly Productive Soils.

As identified above in Figure 2 and on the scheme plan in **Appendix [C],** the subject site contains a split land use classification under the NPS-HL. The flatter land adjacent to Wanaka Mt Aspiring Road is located in LUC 3 (deemed highly productive), and the remainder of the property inclusive of proposed Lot 2 and the area of proposed residential development is LUC 6.

Compass Agribusiness were engaged by the applicant to undertake a productive capacity assessment report for the proposal, and this is contained in **Appendix [J]**. The current use of the property consists of a developed irrigated area of 10.7 Ha, and the remaining 12.7 Ha area is essentially native - consisting of kanuka stands, some over sown and native grasses and considerable rabbit burrows and holes.

While noting the LUC classification under the NPS-HL, Compass Agribusiness has also considered the Beef and Lamb NZ classification (8 classes of farms across NZ) and finds that the property would be deemed class 6:

> *Farms which breed or trade finishing stock and may do some cash cropping. A proportion of stock may be sold store, especially from dryland farms. Carrying capacity ranges from 6 to 11 stock units per hectare on dryland farms and over 12 stock units per hectare on wetter or irrigated farms. Mainly in Canterbury and Otago, this is the dominant farm class in the South Island.*

The Compass Agribusiness assessment finds that the productivity of the subject site has been significantly enhanced by the implementation of irrigation infrastructure and the 1 million litre/day supply from Lake Wanaka and its current level of productivity is essentially already maximised.

The current productive land use of the site has been quantified with a total annual profit of $8,170.88. Considering the proposed subdivision boundaries, and driveway earthworks, Compass Agribusiness find that the effect on productivity, would result in an annual profit of $8,164.43 – this being a net difference of $6.45.

Compass Agribusiness describe this impact on the productive land area of the subject site as 'miniscule.'

Further to the above, Compass Agribusiness have assessed the proposal against the relevant clauses of the NPS-HL being clause 3.8 - *Avoiding subdivision of highly productive land* and clause 3.10 - *Exemption for highly productive land subject to permanent or long-term constraints.*

Regarding Clause 3.8, Compass Agribusiness find that because the proposed subdivision boundaries follow the LUC 3/LUC 6 classification boundary, there is effectively no adverse impact on the LUC 3 productive capacity.

While there is a 150m^2 loss of LUC 3 land for the passing bay upgrades and new driveway connection, Compass Agribusiness find that this has a negligible impact on total feed that can be grown and the stock units held, and profit made.

Importantly, the 150m^2 area of impact is less than that which could occur for permitted earthworks and track improvement/creation on the subject site under the PDP. In addition, as the impacted area is along an existing driveway it is not use for productive activities regardless of the proposal.

Accordingly, the proposal is not considered contrary to Clause 3.8.

Regarding Clause 3.10, subdivision and use of highly productive land is to be avoided unless the matters in parts (1) and (2) are achieved. Importantly, the proposal does not involve any division of the LUC 3 aspects of the land, but the following assessment is made by Compass Agribusiness.

The LUC 3 land area contained within the block is 10.97 hectares, which in itself could be considered a long-term constraint due to being of an uneconomic size. The owner's primary income source is from off farm which allows them to farm this block in its current state.

The owner has invested significantly in irrigation infrastructure, and this investment increases the financial returns of the block from $2,643.89 to $7,562.69. This financial return demonstrates that the block is uneconomic in size and this low economic return is a long-term constraint.

The proposed subdivision and development results in a loss of 150m^2 or 0.14% of the area of LUC 3 land. Accordingly, and with productive and economic loss outlined in the Compass Agribusiness assessment, the proposal is considered to avoid any significant loss of productive capacity of highly productive land.

Further, the proposed development does not fragment any further large and cohesive area of highly productive land. The Compass report notes that the land to the south has been planted in natives (and it also contains a consented air strip), and the land to the north is unirrigated. Both properties have a lower potential for productivity and are held in separate ownership and are therefore unlikely to be utilised as a cohesive productive area.

Reverse sensitivity effects on adjacent highly productive land are negligible. The surrounding land use is similar to that presently occurring and which will continue on proposed Lot 1 of the subject site. In addition, the applicant volunteers a Consent Notice condition to protect adjacent landowners from reverse sensitivity complaints from any future owner of proposed Lot 2.

Taking all the above into consideration, and relying on the expert advice of Compass Agribusiness, the proposed development is considered to have a less than minor adverse effect on highly productive soils.

7.3.8 Effects on Landscape Values.

Given the landscape status of the subject site being within an ONL and the Mt Alpha ONL Landscape Priority Area, RMM have undertaken a comprehensive assessment of landscape and visual effects of the proposed development, and their expert opinions are relied on for my own assessment. The RMM assessment considers both the temporary effects of the development (construction earthworks and implementation of the planting) and the potential permanent effects.

In regard to the temporary visual and landscape character effects of construction which arise from earthworks for the platform, formation of mounding, and driveway access, RMM note that these will be visible from the Roy's Peak walking track but will be mitigated by the separation distance (1.9km) such that these temporary effects will be low.

From the Wanaka Mt Aspiring Road, four separate viewpoints were assessed. The first point is looking in a northerly direction toward the site at approximately 600m. RMM find that the proposed Lot 2 platform and access are entirely screened from this location and there will be no temporary adverse effects from this location.

The viewpoints 2 – 4 are all located north of the subject site and comprise views toward the site when travelling south toward Wanaka from the Roy's Peak Carpark and two road locations 1.5kms and 2.0kms respectively from the subject site.

RMM find that the site and proposed building platform and driveway access will be partially visible from these locations although fleetingly, generally at speed (over 80km/hr) and for short sections of the road (100m – 200m). Existing topography and vegetation will assist in mitigating any development and RMM find that temporary effects will be very low to low.

From the Millenium Walking Track the site of proposed Lot 2 is visible at distances of 1.25kms and 1.85kms respectively and RMM find that distance and screening by kanuka will ensure the temporary effects will be very low.

From Lake Wanaka as assessed at two locations 1.2kms and 2.5kms from proposed Lot 2, RMM find that the development area is only visible from the furthest location, and the distance, panoramic views, and the complexity of the view will ensure that temporary effects will be very low.

Having visited the site and surrounds, I agree with and accept the expert advice of RMM and consider the temporary adverse effects on visibility and landscape character to be less than minor.

RMM have assessed the permanent adverse effects on visibility and landscape character of the development and future built form from the same viewpoints described above. Their assessment is based upon completion of all construction works and full establishment of the proposed landscape mitigation (mounding and planting).

Their expert opinion is that effects on visibility and landscape character from these locations will range from no effect – low effect.

They reach these conclusions based upon mitigating factors of separation distance, complexity and scale of the panoramic views, existing vegetation and topography, and the effectiveness of the proposed landscape mitigation planting.

Importantly, RMM's expert opinion is that following the completion of earthworks, construction, and establishment of landscape mitigation, any future residential unit on the proposed Lot 2 building platform and the driveway extension will not be visible within near / close viewpoint locations. Further, they consider it will be "reasonably difficult to see" when viewed from distant locations beyond the boundary of the site, and when viewed from these locations, the development would have a very low to low degree of adverse effects on the existing landscape values of the Mount Alpha ONL.

Regarding views from adjoining neighbours, the effects on Trilane Industries Limited (Lot 1 Deposited Plan 24014) have been considered by RMM. They find that there is no degree of adverse visual effects experienced from the lodge during earthworks and construction and at completion of construction and implementation of the full landscape mitigation.

This is because RMM consider surrounding vegetation and landform fully screens / encloses the proposed Lot 2 building platform / future built form.

Regarding the neighbour to the north Apres Demain Limited, RMM notes that:

> "*photos taken from within the Lot 2 building platform indicated that future built form at a 5.5m height will be visible from a section of the adjoining driveway when travelling south, along with possible views from the south side of the dwelling. However, proposed landscape mitigation in the form of vegetated landform mounding, and clusters of mountain beech will, once established, serve to screen and fully contain any such views*."

Further, RMM note that in regard to temporary effects during earthworks/construction, only a very low degree (less than minor) effect on existing landscape values would arise for this neighbour and no degree of effect following construction and full establishment of the landscape mitigation.

The expert advice of RMM is accepted and based on the seven-point landscape effects scale and comparative RMA effects scale in their report, both the temporary and the permanent effects on visibility and landscape character will be no more than minor.

7.3.9 Cumulative Effects.

A cumulative effect is a gradual build-up of consequences over a period of time and includes a combination of effects from other activities to create an overall effect on the environment that will occur through the implementation of a proposed development.

RMM have given specific consideration to the potential cumulative effects of the proposal on visual effects and landscape character noting that:

> *"The existing Lot 1 accessway has been utilised as shared access, while the proposed Lot 2 building platform and section of extended accessway have been carefully located. Further to this, the building platform has been deliberately nestled into the slope where cut ensures that the dwelling will be no more than 5.5m, extending above RL347.40, and the access drive specifically designed on site to weave through existing stands of kanuka, running along the site contours to reduce potential adverse landscape, visual and cumulative effects and ensure the protection of existing Mount Alpha ONL landscape values.*
>
> *Existing boundaries / fence lines within the site will remain unchanged by the proposal, to avoid artificial boundaries or unnatural lines in the landscape, which are inconsistent with identified landscape values. Water tanks have been clustered with existing tanks. Plant species used will reflect the existing vegetation patterns on the site and in the surrounding receiving environment.*
>
> *Although the proposed subdivision invariably introduces one additional dwelling into the 23.50ha site, the density will be low and consistent with a rural character, with a resulting density of 1 dwelling per 11.7 ha. The additional dwelling is located in such a way that it is spatially removed from the existing dwelling and therefore the dwellings are not seen together from within the site nor from public viewpoints. This reduces the potential for cumulative effects."*

The expert assessment of RMM on these matters is accepted.

Importantly, the landscape capacity limit for the Mt Alpha ONL Landscape Priority Area is qualified by stating that where such development is appropriate, it is contained by landform and / or existing vegetation, with the location scale, and design of any proposal ensuring that it is generally not discernible from external

viewpoints. Developments are to be designed to be of modest scale and have a 'low-key' rural character and should integrate landscape restoration and enhancement and enhance public access where appropriate.

As outlined in the expert assessment from RMM, the proposal is considered to achieve these requirements particularly regarding scale, character, and incorporation of landscape restoration and enhancement.

Further, noting that any residual visibility of future built form in the proposed building platform will be spatially separated from the effects of the existing residential unit, the potential cumulative effects of development on visibility and landscape character will be no more than minor.

7.3.10 Precedent Effects.

Section 104(1)(a) of the RMA requires consideration of "any actual and potential effects on the environment". 'Precedent effects' is essentially an argument that approving one application may influence the Council's decision making on future applications and hence, result in future adverse effects on the environment.

In other words, the predominant concern regarding precedent effects is that future similar applications must be treated 'like for like' so if one proposal such as this building platform is granted, this may be considered to 'open the gate' for a proliferation of similar applications to be sought and subsequently approved.

As such, precedent effects should only necessitate the declining of a proposal where there is an irreconcilable clash with important provisions of the District Plan and where there is a clear proposition that there will be materially indistinguishable and equally clashing resource consent applications to follow such that there will be potential for loss of District Plan integrity.

In this case, the assessment of effects has, relying on the expert reporting from experts of all disciplines, determined that the potential adverse effects on the environment of allowing the proposed development will be no more than minor.

As is illustrated in the proceeding part of this application, the proposal is also considered to be consistent with the relevant objectives and policies of the Proposed District Plan.

This application would not result in a proliferation of similar applications and further resource consents being approved. The effects in this application are limited by both topography and vegetation which is site specific and not necessarily likely to be identical on any other site. Any future proposals would need to be comprehensively assessed on their merits in the same manner as this proposal and there is no guarantee that the same conclusions regarding the environmental effects would be met with any additional proposal, particularly in regard to landscape effects.

7.3.11 Positive Effects.

As illustrated in the ecological assessment by Beale Consultants, the proposal will by year 10, have established a net biodiversity gain and resulted in the offset planting being a self-sustaining ecological community.

7.4 Hazardous substances

The proposed subdivision and land use consent does not involve the use of hazardous substances and installations.

7.5 Discharge of contaminants

The proposal does not include the discharge of any contaminant other than sediment which may be a by product of the necessary earthworks particularly for creating the new driveway, building platform and the mitigation mounding.

Southern Land have prepared an EMP for the proposed works and in addition, the ORC will undertake an assessment of a future land use consent and discharge permit for residential earthworks and will impose conditions for environmental management and monitoring.

7.6 Mitigation measures

The applicant has volunteered a range of consent conditions as outlined through Section 5 of this application.

7.7 Identification of interested or affected persons.

In considering the adverse effects on persons via Section 95E(2), no parties have been deemed an affected party.

7.8 Monitoring.

No monitoring is required other than illustrated in the volunteered conditions of consent and expert reports that will be complied with.

7.9 Customary rights

The proposed activity will have no effect on any customary rights.

8 Notification

Public and limited notification matters of consideration are detailed below.

8.1 Section 95A: Public Notification

In terms of Section 95A(1), a consent authority must follow the steps set out in Section 95A, in the order given, to determine whether to publicly notify an application for a resource consent. The four steps within Section 95A(1) are addressed below.

Step 1: Mandatory public notification in certain circumstances.

The following matters are noted:

- **The applicant is requesting public notification** of the proposal (Section 94A(3)(a)).

- Provided a further information request is reasonable; the applicant is unlikely to refuse to provide information or refuse the commissioning of a report under Section 92(2)(b) of the Act (Section 95A(3)(b)).

- The application does not seek to exchange recreation reserve land under Section 15AA of the Reserves Act 1977 (Section 95A(3)(c)).

Based on the above, mandatory public notification of the application is required.

Step 2: Public notification precluded in certain circumstance.

The following matters are noted:

- Public notification is not precluded by any rule or national environmental standard (Section 95A(5)(a)).

- The proposal is not a controlled activity, a restricted discretionary/discretionary subdivision or a residential activity, a boundary activity, or a prescribed activity (Section 95A(5)(b)(i)(ii)(iii)(iv)).

Based on the above, public notification of the application is not precluded.

Step 3: If not precluded by Step 2, public notification is required in certain circumstances.

The following matters are noted:

- Public notification of the proposal is not specifically required by a rule or a national environmental standard (Section 95A(8)(a)).

- The consent authority decides, in accordance with Section 95D, that the proposal will have or is likely to have adverse effects on the environment that a more than minor (Section 95A(8)(b)). The assessment included in this application concludes that the effects will not be less than minor.

Step 4: Public notification in special circumstances.

The following is noted:

- It is considered that there are no special circumstances that warrant the proposal being publicly notified (Section 95A(9)). Consideration as to whether limited notification should occur is addressed below.

8.2 Section 95B: Limited Notification.

Section 95B(1) requires a decision on whether there are any affected persons under Section 95E. The following steps set out in this section, in the order given, are used to determine whether to give limited notification of an application for a resource consent, if the application is not publicly notified under Section 95A.

Step 1: Certain affected groups and affected persons must be notified.

Limited notification is not required under Step 1 as the proposal does not affect customary rights groups, customary marine title groups, nor is it on, adjacent to or may affect land subject to a statutory acknowledgement (Section 95B(2)-(4)).

Step 2: If not required by step 1, limited notification precluded in certain circumstances

Limited notification is not precluded under Step 2, as:

- The proposal is not subject to a rule in the District Plan or national environmental standard that precludes limited notification (Section 95B(6)(a)).

- The proposal is not a controlled activity or a prescribed activity (Section 95B(6)(b).

Step 3: If not precluded by step 2, certain other affected persons must be notified.

Limited notification is not precluded under Step 3 as the proposal is not a boundary activity where the owner of the infringed boundary has provided their approval, nor is the proposal a prescribed activity (Section 95B(7)).

Limited notification is not precluded under Step 3 as the proposal falls into the 'any other activity' category and the effects of the proposal are assessed in the application.

The assessment in this application takes into consideration the exclusions of Section 95E(2) and (3), when assessing whether the proposal will have or is likely to have adverse effects on persons that are minor or more than minor (but not less than minor). No persons have been identified as adversely affected.

Step 4: Further limited notification in special circumstances.

It is considered that there are no special circumstances that apply to the application which warrants limited notification.

9 Statutory Assessment

Clause 2(1)(g) of Schedule 4 of the Resource Management Act 1991 requires an assessment against any relevant planning documents that are referred to in Section 104(1)(b) of this legislation. Such documents include:

- A national environmental standard
- Other regulations
- A national policy statement.
- A New Zealand coastal policy statement
- A regional policy statement or proposed regional policy statement.
- A plan or proposed plan

9.1 Proposed District Plan

Relevant objectives and policies from the PDP are contained in the following Sections:

Chapter 3 - Strategic Directions, Chapter 6 - Landscape, Chapter 21 - Rural, Chapter 25 – Earthworks, Chapter 27 – Subdivision and Development, Chapter 29 – Transport, Chapter 33 – Indigenous Vegetation & Biodiversity.

Chapter 3 – Strategic Directions

Strategic Objectives

3.2.4 ***The distinctive natural environments and ecosystems of the District are protected.***

3.2.4.6 ***The values of significant indigenous vegetation and significant habitats of indigenous fauna are protected.***

Relying on the expert advice of RMM, the ONL and the landscape values of the Mt Alpha ONL Priority Area will be protected.

The expert ecological advice of Beale Consultants is that the proposal will result in a net gain of indigenous biodiversity and ultimately protect the values and habitats of indigenous flora and fauna.

The proposal therefore achieves these objectives.

3.2.5 The retention of the District's distinctive landscapes.

3.2.5.2 Within the Rural Zone, new subdivision, use and development is inappropriate on Outstanding Natural Features or in Outstanding Natural Landscapes unless:

a. where the landscape values of Priority Areas of Outstanding Natural Features and Outstanding Natural Landscapes are specified in Schedule 21.22, those values are protected; or

b. where the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes are not specified in Schedule 21.22, the values identified according to SP 3.3.45 are protected.

As outlined in the expert landscape assessment from RMM, the proposal will have no more than minor effect's on landscape, will be reasonably difficult to see, and will maintain the identified values of the Mt Alpha ONL Priority Area.

Accordingly, relying on this expert advice, the proposal will be consistent with these objectives.

Strategic Policies

3.3.19 Protect SNAs and encourage enhanced indigenous biodiversity outcomes.

While the proposal results in an initial loss of indigenous vegetation, the Beale Consultants assessment confirms that there will be an overall net gain in indigenous biodiversity from implementation of the development.

Relying on that expert advice, the proposal is consistent with this policy.

3.3.23 Ensure that the effect of cumulative subdivision and development for the purposes of Rural Living does not compromise:

a. the protection of the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes; and

b. the maintenance of the landscape character and maintenance or enhancement of the visual amenity values of Rural Character Landscapes.

An assessment of cumulative effects of the proposed development was undertaken by RMM and in the AEE above. The expert advice from RMM is that

the proposed building platform and future built form will be spatially removed from the existing residential unit ensuring they are not seen together in public or private viewpoints. Accordingly cumulative effects are minor, and the values of the Mt Alpha ONL Priority Area are protected.

Accordingly, the proposal is consistent with these policies.

3.3.30 *Protect the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes.*

3.3.31 *Avoid adverse effects on the landscape values of the District's Outstanding Natural Features and Outstanding Natural Landscapes from residential subdivision, use and development where there is little capacity to absorb change.*

RMM have identified that the proposed building platform and associated development is appropriately located where the landscape can absorb development without adverse effects on the identified landscape values, particularly relating to open space, natural character, and visual cohesion.

Accordingly, the proposal is consistent with these policies.

Chapter 6 - Landscape

6.3.3.1 *Recognise that subdivision and development is inappropriate on Outstanding Natural Features or in Outstanding Natural Landscapes unless:*

a. landscape values are protected; and

b. in the case of any subdivision or development, all buildings and other structures and all changes to landform or other physical changes to the appearance of land will be reasonably difficult to see from beyond the boundary of the site in question.

6.3.3.5 *Maintain the open landscape character of Outstanding Natural Features and Outstanding Natural Landscapes where it is open at present.*

The expert landscape assessment by RMM has concluded that the landscape values as outlined in the Mt Alpha ONL Landscape Priority Area, will be protected.

Further, RMM have also stated that following the completion of earthworks, construction, and establishment of landscape mitigation, future built form on the proposed Lot 2 building platform and the driveway extension will not be visible within near / close viewpoint locations, will be reasonably difficult to see when

viewed from distant locations beyond the boundary of the site, and when viewed from these locations, will have overall a very low to low degree of adverse effects on the existing landscape values of the Mount Alpha ONL.

Accordingly, the proposal is consistent with these policies.

Chapter 21 – Rural

21.2.1 Objective - A range of land uses, including farming are enabled while:

a. Protecting the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes;

b. Maintaining the landscape character of Rural Character Landscapes and maintaining or enhancing their visual amenity values;

c. Maintaining or enhancing amenity values within the rural environment; and

d. Maintaining or enhancing nature conservation values.

As outlined above, the expert landscape assessment by RMM has concluded that the landscape values as outlined in the Mt Alpha ONL Landscape Priority Area, will be protected.

Further, RMM have also stated that following the completion of earthworks, construction, and establishment of landscape mitigation, future built form on the proposed Lot 2 building platform and the driveway extension will not be visible within near / close viewpoint locations, will be reasonably difficult to see when viewed from distant locations beyond the boundary of the site, and when viewed from these locations, will have overall a very low to low degree of adverse effects on the existing landscape values of the Mount Alpha ONL.

Nature conservation values will be enhanced on the subject site. As outlined in the Beale Consultants ecological report, the proposal will result in a net gain of indigenous biodiversity.

Relying on this expert advice, the proposal will achieve the outcome sought by this objective.

21.2.1.3 Require buildings to be set back a minimum distance from internal boundaries and road boundaries in order to mitigate potential adverse effects on landscape character, visual amenity, outlook from neighbouring properties and to avoid adverse effects on established and anticipated activities.

The proposed Lot 2 building platform has been located considerably further than the minimum setback distances of the PDP to all the proposed boundaries. Additionally, landscape mitigation in the form of mounding and planting has been proposed to maintain amenity and outlook from both the Apres Demain Ltd site back to proposed Lot 2 and vice versa.

The proposal is consistent with this policy.

21.2.1.5 Have regard to the location and direction of lights so they do not cause glare to other properties, waterbodies, roads, public places or views of the night sky.

The RMM landscape report contains recommended lighting controls that will be imposed on the Record of Title for proposed Lot 2 to ensure protection of the night sky and to avoid making future built form prominent.

The proposal is consistent with this policy.

21.2.1.6 Avoid adverse cumulative impacts on ecosystem services and nature conservation values.

Relying on the expert advice of Beale Consultants, the proposal will result in a net gain of indigenous biodiversity values on the subject site.

Accordingly, the proposal is consistent with this policy.

21.2.1.9 Provide adequate firefighting water and fire service vehicle access to ensure an efficient and effective emergency response.

The AEE and infrastructure assessment from Southern Land confirms that there is an adequate supply of water to the site and each of the proposed Lots. This is lawfully established and covered by existing easements.

The existing water tanks can accommodate two fire-hydrants and a hydrant and hardstand at the end of the driveway of Lot 2 is proposed and can be ensured through Consent Notice condition.

The access to proposed Lot 2 has been designed in accordance with Council standards and can adequately provide for fire-fighting vehicle access.

The proposal is consistent with this policy.

21.2.2 Objective - The life supporting capacity of soils is sustained.

21.2.2.1 Allow for the establishment of a range of activities that utilise the soil resource in a sustainable manner.

21.2.2.2 Maintain the productive potential and soil resource of Rural Zoned land and encourage land management practices and activities that benefit soil and vegetation cover.

21.2.2.3 Protect the soil resource by controlling activities including earthworks, indigenous vegetation clearance and prohibit the planting and establishment of identified wilding exotic trees with the potential to spread and naturalise.

A comprehensive assessment of the effects of the proposal on the soil resource and productivity has been undertaken by Compass Agribusiness. Relying on their expert assessment, the proposal will have a miniscule effect on the availability of productive land on the subject site (due to minor earthworks). The minor earthworks are considerably below the permitted baseline for earthworks in the PDP.

There is no fragmentation of the highly productive land and the current stock grazing activities that occur on the subject site will be able to continue without change if the proposal is granted.

The proposal is consistent with these policies.

21.2.3 Objective - The life supporting capacity of water is safeguarded through the integrated management of the effects of activities.

Policies

21.2.3.1 In conjunction with the Otago Regional Council, regional plans and strategies:

a. encourage activities that use water efficiently, thereby conserving water quality and quantity;

b. discourage activities that adversely affect the potable quality and life supporting capacity of water and associated ecosystems.

As outlined in the AEE and the Southern Land infrastructure assessment, water is obtained from Lake Wanaka through a lawfully established abstraction system and within the permitted activity abstraction limits.

The abstraction and use of water is therefore considered to be efficient and will safeguard the quantity of water.

The infrastructure assessment includes an EMP and erosion and sediment controls to ensure that temporary effects of construction do not affect water quality.

A site and soils assessment has been undertaken and it is expected that an on-site wastewater disposal system that meets the relevant standards can be developed on-site in accordance with the permitted activity discharge rules of the Regional Plan.

As such, the proposal is not considered to adversely affect water quality or ecosystems through inappropriate discharges.

The proposal is consistent with these policies.

21.2.4 Objective - Situations where sensitive activities conflict with existing and anticipated activities are managed to minimise conflict between incompatible land uses.

Policies

21.2.4.1 New activities must recognise that permitted and established activities in the Rural Zone may result in effects such as odour, noise, dust and traffic generation that are reasonably expected to occur and will be noticeable to residents and visitors in rural areas.

21.2.4.2 Control the nature, scale and location of activities seeking to establish in the Rural Zone, so as to minimise conflict with permitted and established activities, that may be incompatible with those activities.

The proposal will result in a new residential activity within the rural zone. Residential activities already exist in the receiving environment with no known issues because of reverse sensitivity.

Notwithstanding, the building platform on proposed Lot 2 significantly exceeds the minimum separation distances for residential units from internal boundaries which will assist in mitigating potential reverse sensitivity effects.

Further, a Consent Notice condition has been volunteered to be imposed on the new title for proposed Lot 2 that will advise future landowners of the normal incidences of productive activity in the environment (and the existing airstrip).

Accordingly, the proposal is not expected to result in adverse effects from reverse sensitivity and will be consistent with this objective and policy.

<u>Chapter 25 – Eartworks</u>

25.2.1 Objective – Earthworks are undertaken in a manner that minimises adverse effects on the environment, including through mitigation or remediation, and protects people and communities.

Policies

25.2.1.1 *Ensure earthworks minimise erosion, land instability, and sediment generation and off-site discharge during construction activities associated with subdivision and development.*

25.2.1.2 *Manage the adverse effects of earthworks to avoid inappropriate adverse effects and minimise other adverse effects, in a way that:*

a. *Protects the values of Outstanding Natural Features and Landscapes;*

b. *Maintains the amenity values of Rural Character Landscapes;*

c. *Protects the values of Significant Natural Areas and the margins of lakes, rivers and wetlands;*

d. *Minimises the exposure of aquifers, in particular the Wakatipu Basin, Hāwea Basin, Wānaka Basin and Cardrona alluvial ribbon aquifers;*

   Note: These aquifers are identified in the Otago Regional Plan: Water for Otago 2004.

e. *Protects Māori cultural values, including wāhi tapu and wāhi tūpuna and other sites of significance to Māori;*
f. *Protects the values of heritage sites, precincts and landscape overlays from inappropriate subdivision, use and development; and*
g. *Maintains public access to and along lakes and rivers.*

25.2.1.3 *Avoid, where practicable, or remedy or mitigate adverse visual effects of earthworks on visually prominent slopes, natural landforms and ridgelines.*

25.2.1.3 *Avoid, where practicable, or remedy or mitigate adverse visual effects of earthworks on visually prominent slopes, natural landforms and ridgelines.*

25.2.1.4 *Manage the scale and extent of earthworks to maintain the amenity values and quality of rural and urban areas.*

25.2.1.5 *Design earthworks to recognise the constraints and opportunities of the site and environment.*

25.2.1.6 Ensure that earthworks are designed and undertaken in a manner that does not adversely affect infrastructure, buildings and the stability of adjoining sites.

25.2.1.7 Encourage limiting the area and volume of earthworks being undertaken on a site at any one time to minimise adverse effects on water bodies and nuisance effects of adverse construction noise, vibration, odour, dust and traffic effects.

25.2.1.8 Undertake processes to avoid adverse effects on cultural heritage, including wāhi tapu, wāhi tūpuna and other taonga, and archaeological sites, or where these cannot be avoided, effects are remedied or mitigated.

25.2.1.9 Manage the potential adverse effects arising from exposing or disturbing accidentally discovered material by following the Accidental Discovery Protocol in Schedule 25.10.

25.2.1.10 Ensure that earthworks that generate traffic movements maintain the safety of roads and accesses, and do not degrade the amenity and quality of surrounding land.

25.2.1.11 Ensure that earthworks minimise natural hazard risk to people, communities and property, in particular earthworks undertaken to facilitate land development or natural hazard mitigation.

Overall, the PDP and the objectives and policies outlined above enable earthworks that are part of subdivision and development, if they are undertaken in a way that avoids, remedies, or mitigates adverse effects on communities and the natural environment.

The proposed earthworks are required to enable residential development on proposed Lot 2 and have been developed in accordance with geotechnical recommendations as outlined in the expert geotechnical report from Geosolve. Accordingly, the proposed works are unlikely to result in any stability issues on the subject site or adjacent properties and are not going to exacerbate any natural hazard issues.

The earthworks will be appropriately undertaken and managed while they are carried out as they will be done in accordance with the Environmental Site Management Plan and erosion and sediment controls documented in the Southern Land infrastructure assessment and earthworks plans.

Further, the EMP and erosion and sediment controls will be put to further scrutiny through a regional council consent process for residential earthworks. A condition of consent has been volunteered that the ORC decision is forwarded to the planning manager at QLDC prior to any works commencing.

While there will be temporary effects during the development of the access, building platform and mounding, the changes to the landform and effects of the earthworks will not adversely affect the amenity values of the surrounding area.

This is because as assessed by RMM, upon completion of the earthworks and mitigation planting, the affected areas will be reasonably difficult to see.

Notwithstanding that accidental discovery requirements for cultural and archaeological discovery exists under other legislation, the applicant anticipates and invites the imposition of accidental discovery protocol conditions on the council's decision.

Given the above, the proposal is consistent with the abovementioned objectives and policies.

Chapter 27 – Subdivision and Development

27.2.1 Objective - Subdivision that will enable quality environments to ensure the District is a desirable place to live, visit, work and play.

Policies

27.2.1.1 Require subdivision infrastructure to be constructed and designed so that it is fit for purpose, while recognising opportunities for innovative design.

27.2.1.3 Require that allotments are a suitable size and shape, and are able to be serviced and developed for the anticipated land use under the applicable zone provisions.

27.2.1.5 Recognise that there is an expectation by future landowners that the key effects of and resources required by anticipated land uses will have been resolved through the subdivision approval process.

27.2.1.6 Ensure the requirements of other relevant agencies are fully integrated into the subdivision development process.

27.2.4 Objective - Natural features, indigenous biodiversity and heritage values are identified, incorporated and enhanced within subdivision design.

Policies

27.2.4.1 Incorporate existing and planned waterways and vegetation into the design of subdivision, transport corridors and open spaces where that will maintain or enhance biodiversity, riparian and amenity values.

27.2.4.3 *Encourage subdivision design to protect and incorporate archaeological sites or cultural features, recognising these features can contribute to and create a sense of place. Where applicable, have regard to Maori culture and traditions in relation to ancestral lands, water, sites, wāhi tapu and other taonga.*

27.2.4.4 *Encourage initiatives to protect and enhance landscape, vegetation and indigenous biodiversity by having regard to:*

a. *whether any landscape features or vegetation are of a sufficient value that they should be retained and the proposed means of protection;*

b. *where a reserve is to be set aside to provide protection to vegetation and landscape features, whether the value of the land so reserved should be off-set against the development contribution to be paid for open space and recreation purposes.*

27.2.5 Objective - Infrastructure and services are provided to new subdivisions and developments.

Policies – Transport, Access, and Roads

27.2.5.1 *Integrate subdivision roading with the existing road networks in a safe and efficient manner that reflects expected traffic levels and the provision for safe and convenient walking and cycling.*

For the purposes of this policy, reference to 'expected traffic levels' refers to those traffic levels anticipated as a result of the zoning of the area in the District Plan.

27.2.5.2 *Ensure safe and efficient pedestrian, cycle and vehicular access is provided to all lots created by subdivision and to all developments.*

27.2.5.3 *Provide linkages to public transport networks, and to trail, walking and cycling networks, where useful linkages can be developed.*

27.2.5.4 *Ensure the physical and visual effects of subdivision and roading are minimised by utilising existing topographical features.*

27.2.5.5 *Ensure appropriate design and amenity associated with roading, vehicle access ways, trails and trail connections,*

walkways and cycle ways are provided for within subdivisions by having regard to:

a. *the location, alignment, gradients and pattern of roading, vehicle parking, service lanes, access to lots, trails, walkways and cycle ways, and their safety and efficiency;*

b. *the number, location, provision and gradients of access ways and crossings from roads to lots for vehicles, cycles and pedestrians, and their safety and efficiency;*

c. *the standard of construction and formation of roads, private access ways, vehicle crossings, service lanes, walkways, cycle ways and trails;*

d. *the provision and vesting of corner splays or rounding at road intersections;*

e. *the provision for and standard of street lighting, having particular regard to siting and location, the provision for public safety and the avoidance of upward light spill adversely affecting views of the night sky.*

f. *the provision of appropriate tree planting within roads in urban areas;*

g. *any requirements for widening, formation or upgrading of existing roads;*

h. *any provisions relating to access for future subdivision on adjoining land;*

i. *the provision and location of public transport routes and bus shelters in urban areas.*

Water supply, stormwater, wastewater

Water

27.2.5.7 *Ensure water supplies are of a sufficient capacity, including fire fighting requirements, and of a potable standard, for the anticipated land uses on eachlotor development.*

27.2.5.10 *Ensure appropriate water supply, design and installation by having regard to:*

a. *the availability, quantity, quality and security of the supply of water to the lots being created;*

b. *water supplies for fire fighting purposes;*

c. *the standard of water supply systems installed in subdivisions, and the adequacy of existing supply systems outside the subdivision;*

d. *any initiatives proposed to reduce water demand and water use.*

Stormwater

27.2.5.11 Ensure appropriate stormwater design and management by having regard to:

a. *any viable alternative designs for stormwater management that minimise run-off and recognises stormwater as a resource through re-use in open space and landscape areas;*

b. *the capacity of existing and proposed stormwater systems;*

c. *the method, design and construction of the stormwater collection, reticulation and disposal systems, including connections to public reticulated stormwater systems;*

d. *the location, scale and construction of stormwater infrastructure;*

e. *the effectiveness of any methods proposed for the collection, reticulation and disposal of stormwater run-off, including opportunities to maintain and enhance water quality through the control of water-borne contaminants, litter and sediments, and the control of peak flow.*

Wastewater

27.2.5.13 Treat and dispose of sewage in a manner that:

a. *maintain public health;*

b. *avoids adverse effects on the environment in the first instance; and*

c. *where adverse effects on the environment cannot be reasonably avoided, mitigates those effects to the extent practicable.*

27.2.5.14 *Ensure appropriate sewage treatment and disposal by having regard to:*

a. *the method of sewage treatment and disposal;*
b. *the capacity of, and impacts on, the existing reticulated sewage treatment and disposal system;*

c. *the location, capacity, construction and environmental effects of the proposed sewage treatment and disposal system.*

Energy Supply and Telecommunications

27.2.5.16 *Ensure adequate provision is made for the supply and installation of reticulated energy, including street lighting, and communication facilities for the anticipated land uses while:*

a. *providing flexibility to cater for advances in telecommunication and computer media technology, particularly in remote locations;*

b. *ensure the method of reticulation is appropriate for the visual amenity and landscape values of the area by generally requiring services are underground, and in the context of rural environments where this may not be practicable, infrastructure is sited in a manner that minimises visual effects on the receiving environment;*

c. *generally require connections to electricity supply and telecommunications systems to the boundary of the net area of the lot, other than lots for access, roads, utilities and reserves.*

Easements

27.2.5.17 *Ensure that services, shared access and public access is identified and managed by the appropriate easement provisions.*

27.2.5.18 *Ensure that easements are of an appropriate size, location and length for the intended use of both the land and easement.*

The purpose of the subdivision chapter identifies that good subdivision should result in effective and efficient provision of infrastructure services at the developer's

expense, should maintain a safe and efficient roading network with appropriate internal access and parking, and the retention of anticipated amenity values through good subdivision design.

The AEE and the infrastructure assessment from Southern Land along with the geotechnical and soakage report from Geosolve has illustrated that all necessary services can be provided to proposed Lot 2 along with the provision of appropriate easements where necessary.

Confirmation of reticulated power and telecom services has been obtained from the service providers and Consent Conditions volunteered for the use of wireless/satellite-based telecom services. Consent Notice conditions have also been volunteered to ensure the appropriate development of wastewater and stormwater disposal systems in accordance with the recommendations in the expert reports at the time of future built form on proposed Lot 2.

Sufficient water can be supplied for potable water, firefighting, and irrigation. Consent Notice conditions are again proposed to ensure the development of appropriate storage, hardstand area, and hydrant on proposed Lot 2.

The proposal efficiently uses the existing driveway and vehicle crossing with upgrades proposed to the crossing to achieve Council standards and to the driveway to provide passing bays. The new access has been designed to Council standards and will adequately provide for emergency service vehicles.

While there are no minimum lot sizes for the Rural Zone or 'design guidelines,' the proposed subdivision has been designed to ensure that boundaries maintain the existing productive land use of the subject site and therefore protect the open space as viewed from the Wanaka Mt Aspiring Road.

The driveway and building platform have been designed to 'nestle' into the topography and existing vegetation to maintain the amenity and character of the ONL as outlined by RMM.

Overall, the proposal is consistent with the objectives and policies above.

Chapter 29 – Transport

29.2.1 Objective - An integrated, safe, and efficient transport network that:

- ***a. provides for all transport modes and the transportation of freight;***
- ***b. provides for future growth needs and facilitates continued economic development;***
- ***c. reduces dependency on private motor vehicles and promotes the use of shared, public, and active transport;***

d. contributes towards addressing the effects on climate change;
e. reduces the dominance and congestion of vehicles, particularly in the Town Centre zones; and
f. Enables the significant benefits arising from public walking and cycling trails.

Policies

29.2.1.1 *Require that transport networks including active transport networks, are well-connected and specifically designed to:*

a. enable an efficient public transport system;

b. reduce travel distances and improve safety and convenience through discouraging single connection streets; and

c. provide safe, attractive, and practical walking and cycling routes between and within residential areas, public facilities and amenities, and employment centres, and to existing and planned public transport.

29.2.1.2 *Recognise the importance of expanded public water ferry services as a key part of the transport network and enable this by providing for park and ride, public transport facilities, and the operation of public water ferry services.*

29.2.1.3 *Provide a roading network within the Town Centre zones that supports the zones becoming safe, high quality pedestrian dominant places and enable the function of such roads to change over time.*

29.2.1.4 *Acknowledge the potential need to establish new public transport corridors beyond existing roads in the future, particularly between Frankton and the Queenstown Town Centre.*

29.2.1.5 *Enable and encourage the provision of electric vehicle (EV) charging points/parking spaces within non-accessory parking, within roads where appropriate, as part of Park and Ride, and in association with accessory parking related to High Traffic Generating Activities.*

29.2.1.6 *Facilitate private coach transport as a form of large scale shared transport, through:*

a. *enabling the establishment of off-site or non-accessory coach parking in specified zones;*

b. *allowing visitor accommodation activity to provide coach parking off-site;*

c. *recognising that off-site or non-accessory coach parking is anticipated in the commercial precincts of the Settlement zones provided that it is appropriately located and designed; and*

d. *providing for off-site or non-accessory coach parking seeking to establish outside of specified zones only where the site location and design measures mitigate adverse effects on the transport network, amenity of neighbouring sites, and the quality of the streetscape and pedestrian environment.*

29.2.1.7 *Recognise that shared and commercially owned and operated transport services can complement active and public transport to achieve an efficient transport network.*

29.2.1.8 *Acknowledge the benefits of drop-off and pickup areas for shared transport, public transport, and active transport, where appropriately located.*

29.2.2 ***Objective - Parking, loading, access, and onsite manoeuvring that are consistent with the character, scale, intensity, and location of the zone and contributes toward:***

a. providing a safe and efficient transport network;

b. compact urban growth;

c. economic development;

d. facilitating an increase in walking and cycling and the use of public transport; and

e. achieving the level of residential amenity and quality of urban design anticipated in the zone.

Policies

29.2.2.1 *Manage the number, pricing, location, type, and design of parking spaces, queuing space, access, and loading space in a manner that:*

a. *is safe and efficient for all transport modes and users, including those with restricted mobility, and particularly in relation to facilities such as hospitals, educational facilities, and day care facilities;*

b. *is compatible with the classification of the road by:*

   (i) ensuring that accesses and new intersections are appropriately located and designed and do not discourage walking and cycling or result in unsafe conditions for pedestrians or cyclists;
   (ii) avoiding heavy vehicles reversing off or onto any roads; and
   (iii) ensuring that sufficient manoeuvring space, or an alternative solution such as a turntable or car stacker, is provided to avoid reversing on or off roads in situations where it will compromise the effective, efficient, and safe operation of roads.

c. *contributes to an increased uptake in public transport, cycling, and walking in locations where such alternative travel modes either exist; are identified on any Council active transport network plan or public transport network plan; or are proposed as part of the subdivision, use, or development;*

d. *provides sufficient parking spaces to meet demand in areas that are not well connected by public or active transport networks and are not identified on any Council active or public transport network plans;*

e. *provides sufficient onsite loading space to minimise congestion and adverse visual amenity effects that arise from unmanaged parking and loading on road reserves and other public land;*

f. *is compatible with the character and amenity of the surrounding environment, noting that exceptions to the design standards may be acceptable in special character areas and historic management areas;*

g. *avoids or mitigates adverse effects on the amenity of the streetscape and adjoining sites; and*

h. *provides adequate vehicle access width and manoeuvring for all emergency vehicles.*

29.2.2.11 *Mitigate the effects on safety and efficiency arising from the location, number, width, and design of vehicle crossings and accesses, particularly in close proximity to intersections and adjoining the State Highway, while not unreasonably preventing development and intensification.*

29.2.3 ***Objective - Roads that facilitate continued growth, are safe and efficient for all users and modes of transport and are compatible with the level of amenity anticipated in the adjoining zones.***

Policies

29.2.3.1 *Establish design standards for roads and accesses, including those in Table 3.2 of the QLDC Land Development and Subdivision Code of Practice (2018), and require adherence to those standards unless it can be demonstrated that the effects of the proposed design on:*

a. the active and public transport networks and the efficiency and safety of the roading network are no more than minor; and

b. amenity values, urban design, landscape values are appropriately mitigated.

29.2.3.2 *Enable transport infrastructure to be constructed, maintained, and repaired within roads in a safe and timely manner while:*

a. mitigating adverse effects on the streetscape and amenity of adjoining properties resulting from earthworks, vibration, construction noise, utilities, and any substantial building within the road;

b. enabling transport infrastructure to be designed in a manner that reflects the identity of special character areas and historic management areas and avoids, remedies, or mitigates any adverse effects on listed heritage items or protected trees; and

c. requiring transport infrastructure to be undertaken in a manner that avoids or mitigates effects on landscape values.

29.2.3.3 *Ensure new roads are designed, located, and constructed in a manner that:*

a. provides for the needs of all modes of transport in accordance with the Council's active transport network plan and public transport network plan and for the range of road

users that are expected to use the road, based on its classification;

b. *provides connections to existing and future roads and active transport network;*

c. *avoids, remedies, or mitigates effects on listed heritage buildings, structures and features, or protected trees and reflects the identity of any adjoining special character areas and historic management areas;*

d. *avoids, remedies, or mitigates adverse effects on Outstanding Natural Landscapes and Outstanding Natural Features and on landscape values in other parts of the District; and*

e. *provides sufficient space and facilities to promote safe walking, cycling, and public transport within the road to the extent that it is relevant given the location and design function of the road.*

The relevant objectives and policies aim to ensure that the District's transportation network is safe and efficient, and that the parking and access provided is suitable and compatible for the current and future needs of the District.

Importantly, policy 29.2.3.3 specifically at point (d), requires avoidance, remediation, or mitigation of effects from new roads on ONL's.

The proposal is consistent with the relevant objectives and policies in this section. Southern Land have identified that the existing vehicle crossing will be upgraded to achieve the Council's current standards.

Further, sight line distances in each direction from the vehicle crossing are excellent. The addition of one further allotment and one future residential activity will have a negligible impact on overall traffic generation (approximately eight vehicle movements per day) on Wanaka Mt Aspiring Road.

Importantly, during development of the subdivision and the earthworks associated with the proposal, there will be a negligible impact on the safe and efficient operation of the road network as the earthworks have been developed as a balanced cut and fill exercise, so no heavy vehicle movements are needed to deliver or remove cut and fill.

The proposal utilises an existing driveway which is more desirable than creating additional vehicle crossings and separate access. The existing driveway requires only minor modifications to create passing bays to ensure that it remains safe and effective for use by an extra residential activity.

The new driveway for proposed Lot 2 has been designed in accordance with Council standards in terms of width, gradient, surfacing and passing bays. It is suitable for emergency vehicle access.

A significant amount of consideration went into the new driveway design to ensure that it would be well screened by existing vegetation and that the amount of vegetation removal required to facilitate its construction was minimised. The resultant location and design of the access has been assessed by RMM to maintain the values of the Mt Alpha ONL Priority Area.

Given the above, the proposal is consistent with these provisions.

Chapter 33 – Indigenous Vegetation and Biodiversity

33.2.1 Objective – The District's indigenous biodiversity is protected, maintained or enhanced.

Policies

33.2.1.1 Identify and protect the District's Significant Natural Areas and schedule them in the District Plan, including the ongoing identification and protection of Significant Natural Areas through resource consent applications, using the criteria set out in Policy 33.2.1.8.

33.2.1.3 Have regard to and take into account kaitiakitanga and the values of indigenous vegetation, taonga species and habitats. and biodiversity to tangata whenua.

33.2.1.4 Encourage the long-term protection of indigenous vegetation and in particular Significant Natural Areas by encouraging land owners to consider non-regulatory methods such as covenants administered under the Queen Elizabeth II National Trust Act 1977, Reserves Act, or Conservation Act and other protective mechanisms.

33.2.1.5 Undertake activities involving the clearance of indigenous vegetation in a manner that ensures the District's indigenous biodiversity is protected, maintained or enhanced.

33.2.1.6 a. Manage the adverse effects of activities on indigenous biodiversity by:

(i) avoiding adverse effects as far as practicable;

(ii) requiring remediation where adverse effects cannot be avoided;

(iii) *requiring mitigation where adverse effects on the areas identified above cannot be avoided or remediated;*

(iv) *requiring any residual adverse effects on significant indigenous vegetation or indigenous fauna to be offset through protection, restoration and enhancement actions that achieve no net loss and preferably have a net gain in indigenous biodiversity values, having particular regard to:*

A. *limits to biodiversity offsetting due to the affected biodiversity being irreplaceable or vulnerable;*

B. *the ability of a proposed offset to demonstrate it can achieve no net loss or preferably a net gain;*

C. *Schedule 33.10 – Framework for the use of Biodiversity Offsets;*

(v) *enabling any residual adverse effects on other indigenous vegetation or indigenous fauna to be offset through protection, restoration and enhancement actions that achieve no net loss and preferably a net gain in indigenous biodiversity values having particular regard to:*

A. *the ability of a proposed offset to demonstrate it can achieve no net loss or preferably a net gain;*

B. *Schedule 33.10 – Framework for the use of Biodiversity Offsets.*

b. *This policy does not apply to proposals for the upgrading or development of the National Grid (refer to Policy 30.2.8.2A).*

33.2.1.8 *Determine the significance of areas of indigenous vegetation and habitats of indigenous fauna by applying the following criteria:*

a. *Representativeness*

Whether the area is an example of an indigenous vegetation type or habitat that is representative of

that which formerly covered the Ecological District, including degraded examples if they are some of the last examples remaining;

OR

b. *Rarity*

Whether the area supports;

(i) indigenous vegetation and habitats within originally rare ecosystems;

(ii) indigenous species that are threatened, at risk, uncommon, nationally or within the ecological district;

(iii) indigenous vegetation or habitats of indigenous fauna that has been reduced to less than 20% of its former extent, regionally or within a relevant Land Environment or Ecological District;

OR

c. *Diversity and Pattern*

Whether the area supports a highly diverse assemblage of indigenous vegetation and habitat types, and whether these have a high indigenous biodiversity value including:

(i) indigenous taxa;
(ii) ecological changes over gradients;

OR

d. *Distinctiveness*

Whether the area supports or provides habitats for indigenous species:

(i) at their distributional limit within Otago or nationally;
(ii) are endemic to the Otago region;
(iii) are distinctive, of restricted occurrence or have developed as a result of unique environmental factors;

OR

e. Ecological Context

The relationship of the area with its surroundings, including whether the area proposed to be cleared:

(i) has important connectivity value allowing dispersal of indigenous fauna between different areas;

(ii) has an important buffering function to protect values of an adjacent area or feature;

(iii) is important for indigenous fauna during some part of their life cycle.

33.2.1.9 *Recognise opportunities for subdivision, use and development to enhance biodiversity values.*

33.2.1.10 *Facilitate and support restoration of degraded natural ecosystems and indigenous habitats using indigenous species that naturally occur and/ or previously occurred in the area.*

33.2.2 Objective – Significant Natural Areas are protected, maintained and enhanced.

33.2.2.1 *a. Protect and enhance indigenous vegetation within scheduled Significant Natural Areas, and those other areas that meet the criteria in Policy 33.2.1.8, by ensuring:*

(i) indigenous biodiversity values that contribute to its significance are not reduced; and

(ii) significant adverse effects on other values of the area or habitat are avoided.

b. This policy does not apply to proposals for the upgrading or development of the National Grid (refer to Policy 30.2.8.2A)

a. indigenous biodiversity values that contribute to its significance are not reduced; and

b. significant adverse effects on other values of the area or habitat are avoided.

33.2.2.2 Allow the clearance of indigenous vegetation within Significant Natural Areas only where clearance is undertaken in a manner that retains the indigenous biodiversity values that contribute to the significance of the Significant Natural Area.

33.2.2.3 Provide for small scale, low impact indigenous vegetation clearance to enable the maintenance of existing fences and tracks in recognition that the majority of Significant Natural Areas are located within land used for rural activities.

33.2.2.4 Recognise and encourage opportunities to protect and enhance the values of Significant Natural Areas.

33.2.2.5 Recognise the benefits of enabling access to Significant Natural Areas while maintaining, protecting or enhancing the values that contribute to their significance.

33.2.3 Objective - Land use and development maintains indigenous biodiversity values.

Policies

33.2.3.1 Ensure the clearance of indigenous vegetation within the margins of water bodies does not reduce natural character and indigenous biodiversity values, or create erosion.

33.2.3.2 Encourage opportunities to address adverse effects through the retention, rehabilitation or protection of the same indigenous vegetation community elsewhere on the site, subject to Policy 33.2.1.6.d and e.

33.2.3.3 Encourage the retention and enhancement of indigenous vegetation including in locations that have potential for regeneration, or provide stability, or connectivity and particularly where productive values are low, or in riparian areas or gullies.

The proposal is consistent with these objectives and policies. Beale Consultants have undertaken a comprehensive assessment of ecological effects in which they have assessed the significance of the vegetation affected by the proposal using the criteria set out in Policy 33.2.1.8 and the NPS-IB. This assessment has determined the kanuka treeland to be significant.

Policy 33.2.1.6 essentially outlines the effects management hierarchy from the NPS-IB and Beale Consultants have appropriately made recommendations to avoid,

remedy, and mitigate adverse effects and then suggested a viable method of offsetting residual effects that will ultimately result in a net biodiversity gain for the subject site.

Policy 33.2.1.9 supports the enhancement of indigenous biodiversity through subdivision and land use development and Policy 33.2.10 supports restoration of natural ecosystems and indigenous habitats using species that naturally occur and/ or previously occurred in the area. This is what has been proposed in this application.

The proposed ecological offset planting has been discussed and located in consultation with RMM to ensure that the planting will maintain and enhance the natural character values of the landscape.

While formal protection is not offered by way of QEII Covenant, the offset planting (and landscape planting) will be protected by the requirements of this consent application and conditions on the decision, including Consent Notice conditions, which will require the vegetation offset to be maintained in perpetuity.

Overall, the expert advice from Beale Consultants is that ecological biodiversity will be appropriately protected, maintained, and enhanced. Accordingly, the proposal is consistent with these provisions.

9.2 Operative & Proposed Regional Policy Statements

An assessment has been made of the objectives and policies in the Operative and Proposed Regional Policy Statements.

Overall, the objectives and policies in these higher-level statutory documents are not considered to offer any additional and/or specific direction for the assessment than is provided through the objectives and policies of the PDP.

All three documents contain a similar set out of outcomes and means of achieving them. Accordingly, it is considered that the proposal is consistent with the objectives and policies of these documents.

For completeness, it is noted that the key objectives and policies are found in the following sections of the Regional Policy Statements:

<u>Operative Regional Policy Statement:</u>

- *Part B – Chapter 3: Otago Has High Quality Natural Resources and Ecosystems:*

  (i) Objective 3.1 The values (including intrinsic values) of ecosystems and natural resources are recognised and maintained, or enhanced where degraded.

(ii) *Policy 3.1.9 Ecosystems and indigenous biological diversity.*

(iii) *Policy 3.1.11 Natural features, landscapes, and seascapes.*

(iv) *Policy 3.1.13 Environmental enhancement.*

(v) Objective 3.2 Otago's significant and highly-valued natural resources are identified, and protected or enhanced where degraded.

(vi) *Policy 3.2.2 Managing significant indigenous vegetation and habitats.*

(vii) *Policy 3.2.4 Managing outstanding natural features, landscapes and seascapes.*

(viii) *Policy 3.2.18 Managing significant soil.*

- *Part B – Chapter 4: Communities in Otago are resilient, safe and healthy.*

(ix) Objective 4.6 Hazardous substances, contaminated land and waste materials do not harm human health or the quality of the environment in Otago.

(x) *Policy 4.6.5 Managing contaminated land.*

- *Part B – Chapter 5: People are able to use and enjoy Otago's natural and built environment.*

(xi) Objective 5.3 Sufficient land is managed and protected for economic production.

(xii) *Policy 5.3.1 Rural activities*

(xiii) Objective 5.4 Adverse effects of using and enjoying Otago's natural and physical resources are minimised.

(xiv) *Policy 5.4.6 Offsetting for indigenous biological diversity.*

Proposed Regional Policy Statement

- *Domain LF – Land and Freshwater.*

(i) LF–LS–O11 – Land and soil.

(ii) LF–LS–O12 – Use, development, and protection

(iii) UFD–O4 – Development in rural areas.

(iv) LF–LS–P19 – Highly productive Land

(v) UFD–P7 –Rural Areas

(vi) UFD–P8 – Rural lifestyle development

- *Topic ECO – Ecosystems and Indigenous Biodiversity.*

  (i) ECO–O1 – Indigenous biodiversity.

  (ii) ECO–O2 – Restoring and enhancing.

  (iii) ECO–P3 – Protecting significant natural areas and taoka.

  (iv) ECO–P6 – Maintaining indigenous biodiversity.

  (v) ECO–P8 – Restoration and enhancement.

  (vi) ECO–P10 – Integrated approach

- *Topic NFL – Natural Features and Landscapes.*

  (i) NFL–O1 – Outstanding natural features and landscapes.

  (ii) NFL–P2 – Protection of outstanding natural features and landscapes.

- *Topic HAZ – Hazards and Risks.*

  (i) HAZ–CL–O3 – Contaminated land.

  (ii) HAZ–CL–P13 – Identifying contaminated land.

  (iii) HAZ–CL–P14 – Managing contaminated land.

9.3 National Policy Statement for Indigenous Biodiversity

2.1 Objective

The objective of this National Policy Statement is:

(a) to maintain indigenous biodiversity across Aotearoa New Zealand so that there is at least no overall loss in indigenous biodiversity after the commencement date; and

(b) to achieve this:

(i) through recognising the mana of tangata whenua as kaitiaki of indigenous biodiversity; and

(ii) by recognising people and communities, including landowners, as stewards of indigenous biodiversity; and

(iii) by protecting and restoring indigenous biodiversity as necessary to achieve the overall maintenance of indigenous biodiversity; and

(iv) while providing for the social, economic, and cultural wellbeing of people and communities now and in the future

Policies

1: Indigenous biodiversity is managed in a way that gives effect to the decision making principles and takes into account the principles of the Treaty of Waitangi.

2: Tangata whenua exercise kaitiakitanga for indigenous biodiversity in their rohe, including through:

(a) managing indigenous biodiversity on their land; and
(b) identifying and protecting indigenous species, populations and ecosystems that are taonga; and
(c) actively participating in other decision-making about indigenous biodiversity.

3: A precautionary approach is adopted when considering adverse effects on indigenous biodiversity.

4: Indigenous biodiversity is managed to promote resilience to the effects of climate change.

5: Indigenous biodiversity is managed in an integrated way, within and across administrative boundaries.

6: Significant indigenous vegetation and significant habitats of indigenous fauna are identified as SNAs using a consistent approach.

7: SNAs are protected by avoiding or managing adverse effects from new subdivision, use and development.

8: The importance of maintaining indigenous biodiversity outside SNAs is recognised and provided for.

9: Certain established activities are provided for within and outside SNAs.

10: Activities that contribute to New Zealand's social, economic, cultural, and environmental wellbeing are recognised and provided for as set out in this National Policy Statement.

11: Geothermal SNAs are protected at a level that reflects their vulnerability, or in accordance with any pre-existing underlying geothermal system classification.

12: Indigenous biodiversity is managed within plantation forestry while providing for plantation forestry activities.

13: Restoration of indigenous biodiversity is promoted and provided for.

14: Increased indigenous vegetation cover is promoted in both urban and nonurban environments.

15: Areas outside SNAs that support specified highly mobile fauna are identified and managed to maintain their populations across their natural range, and information and awareness of highly mobile fauna is improved.

16: Regional biodiversity strategies are developed and implemented to maintain and restore indigenous biodiversity at a landscape scale.

17: There is improved information and regular monitoring of indigenous biodiversity.

Beale Consultants and Dr Tocher have comprehensively assessed the proposal. The expert assessment using the assessment criteria in the NPS has determined that the vegetation affected by the proposal is significant.

While there will be some initial loss of significant indigenous vegetation, Beale Consultants have recommended 3,500m2 of offset planting which results in an increase in diversity and canopy cover and a self-sustaining area of vegetation by year ten. Using the ecological offset accounting model, this has been determined to provide a net biodiversity gain for the subject site.

The planting therefore accords with policies 7, 13, and 14 and achieves the outcome sought by the objective because there will be no overall loss in indigenous biodiversity and the indigenous biodiversity values will be protected and restored through this consent process.

9.5 National Policy Statement for Highly Productive Land

Objective:

> ***Highly productive land is protected for use in land-based primary production, both now and for future generations.***

Policies

1: Highly productive land is recognised as a resource with finite characteristics and long term values for land-based primary production.

2: The identification and management of highly productive land is undertaken in an integrated way that considers the interactions with freshwater management and urban development.

3: Highly productive land is mapped and included in regional policy statements and district plans.

4: The use of highly productive land for land-based primary production is prioritised and supported.

5: The urban rezoning of highly productive land is avoided, except as provided in this National Policy Statement.

6: The rezoning and development of highly productive land as rural lifestyle is avoided, except as provided in this National Policy Statement.

7: The subdivision of highly productive land is avoided, except as provided in this National Policy Statement.

8: Highly productive land is protected from inappropriate use and development.

9: Reverse sensitivity effects are managed so as not to constrain land-based primary production activities on highly productive land.

The proposed subdivision and development of proposed Lot 2 for rural lifestyle purposes will achieve the outcome sought by the objective.

As identified in the Compass Agribusiness assessment, the proposed subdivision boundaries align with the demarcation between LUC 3 and LUC 6 to ensure that there is no further fragmentation of the highly productive land.

The proposed subdivision boundaries ensures that there is no loss of the current productive land use on the site as all highly productive land will be retained in proposed Lot 1 with the existing residential unit and will enable the current grazing regime to continue unhindered.

While there is a very small area of earthworks to create passing bays and the entrance to the new driveway within the LUC 3 land, Compass Agribusiness find these works to have a miniscule impact on potential productivity.

The assessment in the AEE with specific regard to Clause 3.8 and 3.10 of the NPS-HL finds that the proposal will retain the overall productive capacity of the site, avoids cumulative loss of highly productive land, and is unlikely to result in reverse sensitivity effects that would comprise productive activities on adjacent sites.

Compass Agribusiness also find that the small and uneconomic size of the highly productive land even given the already significant investment in irrigation that has occurred on the site, is a long-term constraint. Further, there is unlikely to be an ability to lease and collectively utilise highly productive land to the north and south of the site. These properties are in different ownership, are planted/contain a consented airstrip or are unirrigated.

For these reasons, the proposed development is consistent with the objective and policies.

10 Section 104 of the Act

Section 104 of the Act states when considering an application, the consent authority must, subject to Part 2 of the Act, have regard to:

- Any actual and potential effects on the environment of allowing the activity;
- Any relevant provisions of a plan or proposed plan;
- Any other matters the consent authority considers relevant and reasonably necessary to determine the application.

As outlined in the application, the proposed subdivision and development will not result in any adverse effects on the environment that are more than minor. Further, the proposed activity is not contrary to the relevant objectives and policies of the PDP, Regional Policy Statements, and National Policy Statements, and finally, there are no other matters relevant to the assessment of the application.

11 Purpose and Principles of the Act

The purpose of Act is to promote the sustainable management of natural and physical resources. Sections 6, 7 and 8 also require consideration.

In terms of Section 6, there is one matter of national importance that is relevant to this proposal being:

(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development.

(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna

As outlined throughout this AEE and the expert landscape assessment from RMM, the proposed subdivision and residential building platform and future built form will not have any more than minor adverse effects on landscape in terms of visibility, character, and the values of the Mt Alpha ONL Priority Area.

Importantly, RMM find that the completed development will be 'reasonably difficult to see' and that it will accord with the landscape absorption qualities described in the Mt Alpha ONL Priority Area Schedule.

The expert ecological assessment prepared by Beale Consultants identifies that the proposal will result in the loss of indigenous vegetation of significance initially, but through the ecological offset planting, there will be a net biodiversity gain through diversity and canopy generation with the offset vegetation being self-sustaining by year 10.

Relying on the expert advice from RMM and Beale Consultants, the proposal will appropriately recognise and provide for these matters of national importance.

Section 7 of the Act states that achieving the purpose of the Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to:

(a) kaitiakitanga:

(aa) the ethic of stewardship:

(b) the efficient use and development of natural and physical resources:

(ba) the efficiency of the end use of energy:

(c) the maintenance and enhancement of amenity values:

(d) intrinsic values of ecosystems:

(e) [Repealed]

(f) maintenance and enhancement of the quality of the environment:

(g) any finite characteristics of natural and physical resources:

(h) the protection of the habitat of trout and salmon:

(i) the effects of climate change:

(j) the benefits to be derived from the use and development of renewable energy.

The proposed subdivision, building platform and future built form will, with the volunteered conditions of consent, achieve the relevant matters that particular regard shall be given to in terms of Section 7 of the Act.

Specifically, matters (c) and (f) will be achieved through the imposition of design controls, and structural landscape planting.

The intrinsic values of ecosystems have been given particular regard through the expert assessment by Beale Consultants and Dr Tocher. With conditions requiring adherence to the recommendations in the Beale Consultants report and Wildlife Act Permit obtained under the Wildlife Act 1953, effects on ecological biodiversity will be no more than minor.

There are no matters under Section 8 of the Act that require consideration with respect to the proposed activity.

For the reasons outlined in the application, the proposed activity is consistent with the purpose and principles of the Act and the associated matters under Part 2 of the Act.

The proposed development will be undertaken in a manner which avoids, remedies, and mitigates potential adverse effects on the environment.

Overall, it is considered that the proposal is consistent with the purpose and principles of the Act and therefore accords with the definition of sustainable management.

QLDC Property Map

Application as Notified 97

The information provided on this map is intended to be general information only. While considerable effort has been made to ensure that the information provided on this map is accurate, current and otherwise adequate in all respects, Queenstown Lakes District Council does not accept any responsibility for content and shall not be responsible for, and excludes all liability, with relation to any claims whatsoever arising from the use of this map and data held within.

0 0.75 1.5 3 km

Scale: 1:24,520

Map Date:
21/08/2024

N

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Guaranteed Search Copy issued under Section 60 of the Land Transfer Act 2017

R.W. Muir
Registrar-General
of Land

Identifier **OT203/280**

Land Registration District **Otago**

Date Issued 17 December 1923

Prior References

OTPR19/13 WA 4/232

Estate Fee Simple

Area 23.5046 hectares more or less

Legal Description Section 6 Block XIII Lower Wanaka Survey District

Registered Owners

Vivienne Mary Laming, Simon Boniface Joseph Laming and A J Wood Trustees Limited

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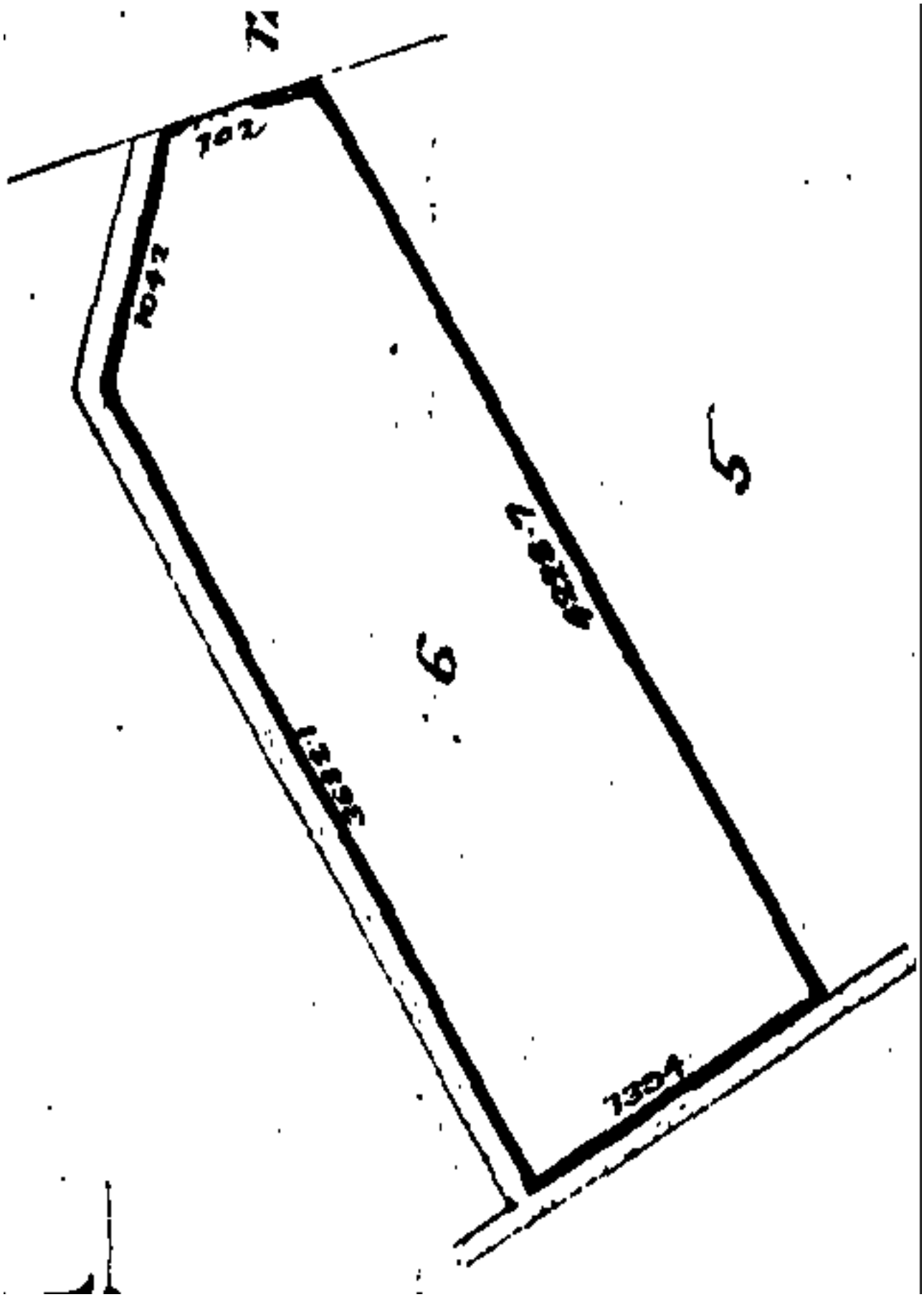
Interests

7819834.1 Mortgage to ANZ National Bank Limited - 21.5.2008 at 9:07 am

Appurtenant hereto are rights to convey water created by Easement Instrument 8545054.1 - 23.8.2010 at 11:40 am

10806732.1 Variation of Mortgage 7819834.1 - 1.6.2017 at 4:42 pm


N
102
1042
5
9
1354

NOTES:
- Boundary data sourced from DP 24014 & DP 549904.
- Abuttal data sourced from LINZ XML
- Aerial Imagery is indicative only and has not been orthorectified

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Lot 3
DP 549904

Lake
Wanaka

Lot 2
DP 549904

LOT 1
18.83 Ha

LOT 2
4.67 Ha

Section 6
Blk XIII
Lower Wanaka SD

Lot 1
DP 24014

Section 15
Block XIII

Section 12 Blk XIII
Lower Wanaka SD

LAKE ROAD

WANAKA - MT ASPIRING ROAD

10m wide Right of Way Easement

Section A - Sight Line

LUC Class 3

LUC Class 6

Passing Bay
Every 100m

Passing Bay
Every 50m

Passing Bays
Every 100m

Passing Bays
Every 100m

See Diag. 'A'

For intersection
Details, See Sheet 3

42.09
98.89
577.13
441.51
164.78
210.10
141.44
263.15
(850.71)
202.24
385.32
179.09
92.20

0 40 80 120 160 200
Scale 1: 3,000 (m)

MEMORANDUM OF EASEMENTS

PURPOSE	SHOWN	BURDENED LAND	BENEFITED LAND
Right of Way	A	LOT 1	LOT 2
Right to Store Water	C	LOT 1	LOT 2

NOTE:
Additional Easements will be required for electricity and water
Area 'B' shows the proposed Building Platform

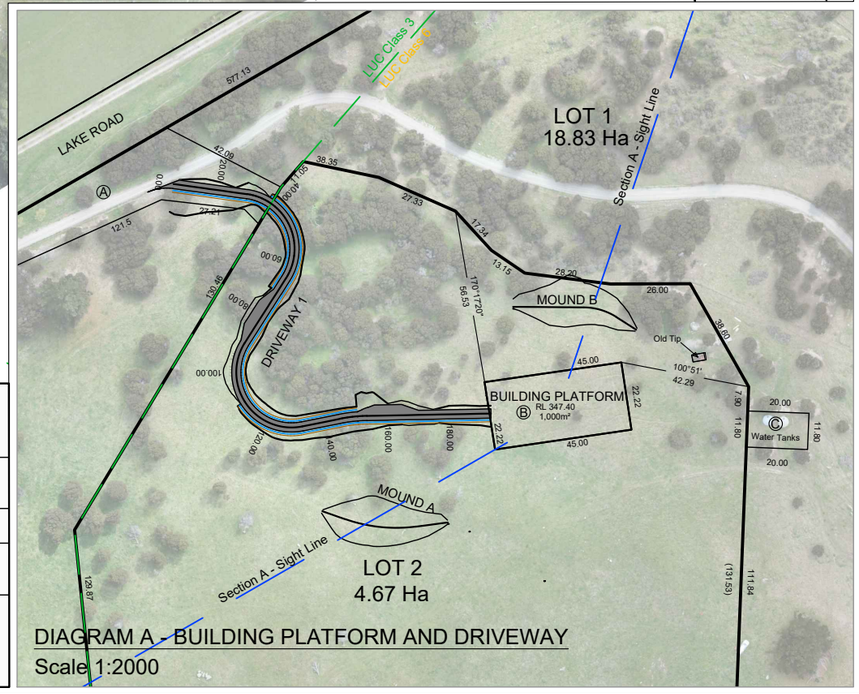

DIAGRAM A - BUILDING PLATFORM AND DRIVEWAY
Scale 1:2000

Notes

Warning

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A DIVISION OF THE NEW ZEALAND INSTITUTE OF SURVEYORS

APPLICANT
Simon Laming

COMPRISED IN
RT OT203/280

TERRITORIAL AUTHORITY
Queenstown Lakes District Council

LAND DISTRICT
Otago

TOTAL AREA	DATE
23.5046ha	4/3/24

Drawing Title

Lots 1 & 2 Being a Proposed Subdivision of Section 6 Block XIII Lower Wanaka SD

538 Wanaka-Mt Aspiring Road

Prepared for

Resource Consent

Plan Revisions

REV.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	4/3/24
B	DESIGN UPDATED	19/8/24
C	RC RFI	11/11/24

SCALE
1:3000 @ A3

DATUM & LEVEL
Lindis Peak 2000

REVISION	DRAWING REFERENCE	Sheet
C	X4069_S1	1 of 4

SURVEYED	DATE	CHECKED	DATE
-	-	LW	19/8/24
DRAWN	DATE	APPROVED	DATE
S.L.	14/5/24	SL	11/11/24

NOTES:
- Boundary data sourced from DP 24014 & DP 549904.
- Abuttal data sourced from LINZ XML
- Aerial Imagery is indicative only and has not been orthorectified

Application as Notified 101

LUC Class 3
LUC Class 6

LAKE ROAD

577.13

LOT 1
18.83 Ha

Section A - Sight Line

42.09
20.00
11.05
38.35
40.00
0.00
27.21
121.5
27.33
17.34
13.15
28.20
26.00
38.60
60.00
80.00
130.46
DRIVEWAY 1
100.00
120.00
140.00
160.00
180.00
170°17'20"
56.53
MOUND B
Max Fill
3.1m
45.00
BUILDING PLATFORM
Ⓑ RL 347.40
1,000m²
22.22
22.22
45.00
Max Cut
3.0m
Old Tip
100°51'
42.29
7.90
11.80
20.00
Ⓒ
Water Tanks
11.80
20.00
(131.53)
111.84
MOUND A
Section A - Sight Line
LOT 2
4.67 Ha

CUT

<-3.0	to	-3.0	m
-3.0	to	-2.5	m
-2.5	to	-2.0	m
-2.0	to	-1.5	m
-1.5	to	-1.0	m
-1.0	to	-0.5	m
-0.5	to	-0.2	m
-0.2	to	-0.0	m
0.0	to	0.2	m
0.2	to	0.5	m
0.5	to	1.0	m
1.0	to	1.5	m
1.5	to	2.0	m
2.0	to	2.5	m
2.5	to	3.0	m
3.0	to	>3.0	m

FILL

EARTHWORKS VOLUMES

Total Cut	2150 m³
Total Fill	2150 m³
Balance	0 m³
Stripping Area	4400 m²

LEGEND
- Major Contour 2m
- Minor Contour 1m

Notes

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Queenstown Lakes District Council

LAND DISTRICT
Otago

TOTAL AREA	*DATE*
23.5046ha	4/3/24

Drawing Title

Earthworks Plan

538 Wanaka-Mt Aspiring Road

Prepared for

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REV.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	4/3/24
B	DESIGN UPDATED	19/8/24
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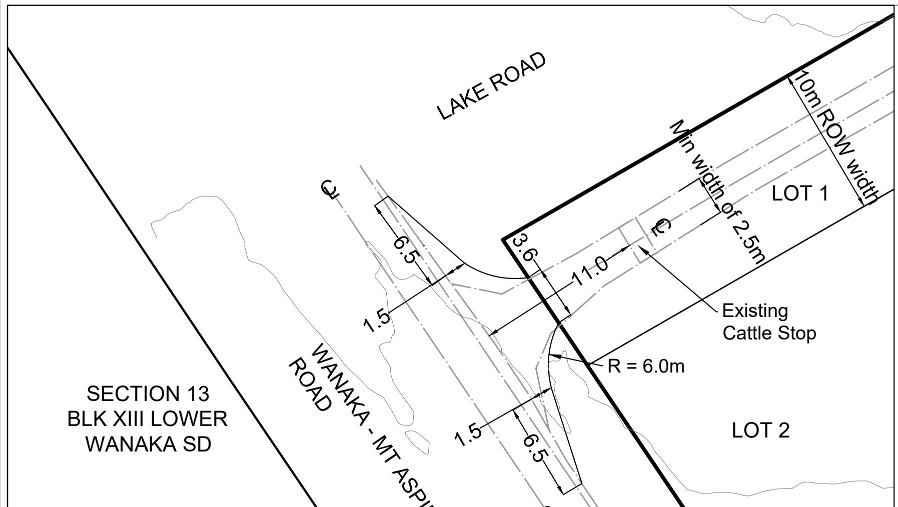
SCALE
1:750 @ A3

DATUM & LEVEL
Lindis Peak 2000

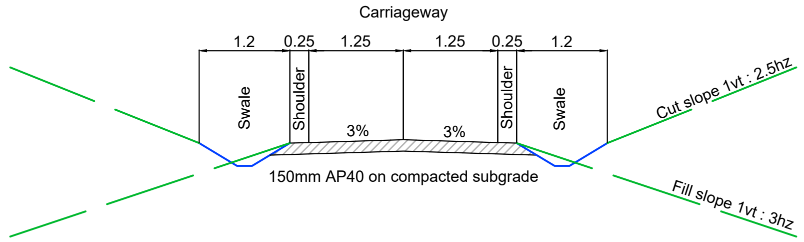
REVISION	*DRAWING REFERENCE*	*Sheet*
C	X4069_S2	2 of 4

SURVEYED	*DATE*	*CHECKED*	*DATE*
-	-	LW	19/8/24
DRAWN	*DATE*	*APPROVED*	*DATE*
S.L.	14/5/24	SL	11/11/24

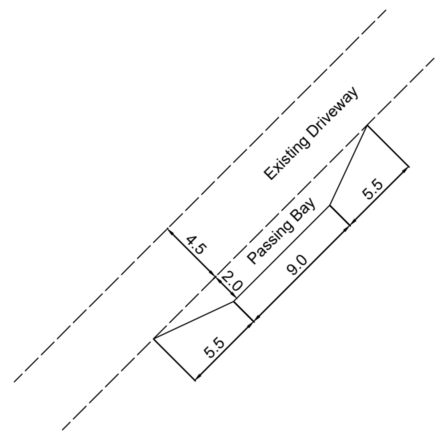
Application as Notified 102



INTERSECTION DETAIL
as per QLDC Diag 8
nts



TYPICAL DRIVEWAY SECTION
nts



PASSING BAY DETAIL
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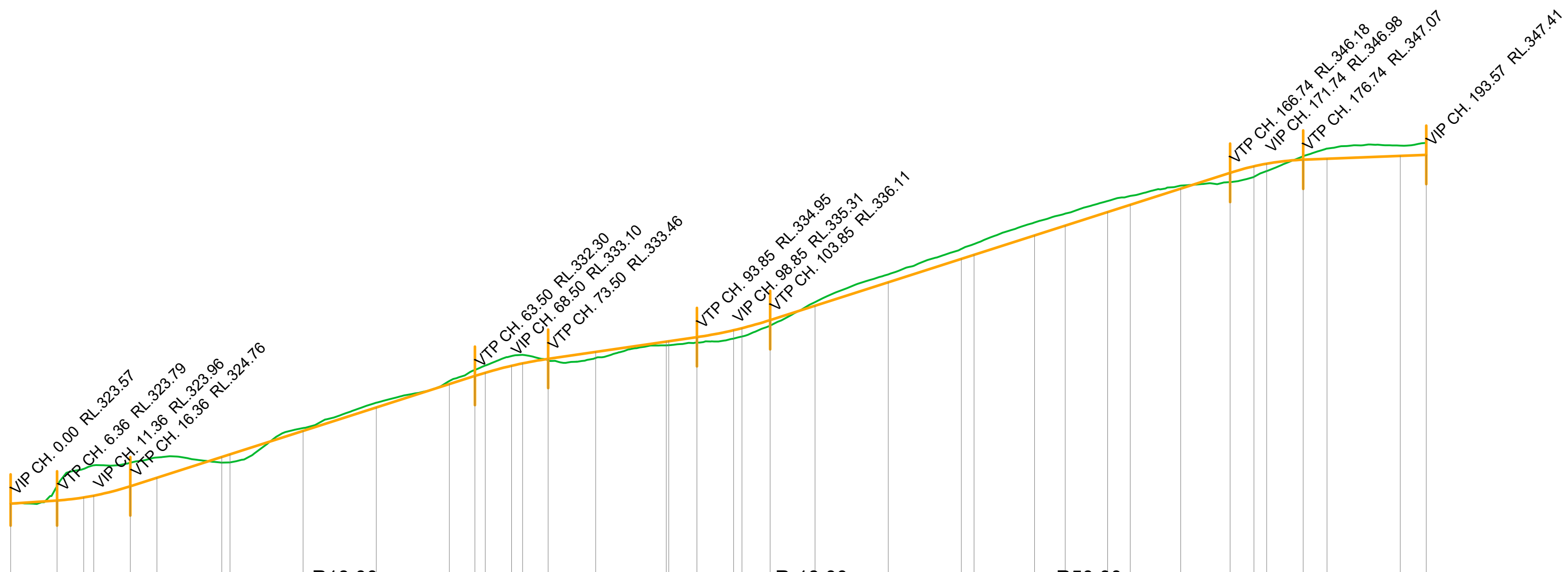

Horiz Curve Data: R18.00m; R-18.00m; R50.00m

Vertical Geometry Grade (%): 3.43%; 16.00%; 7.30%; 16.00%; 1.98%

Vertical Geometry Grade (1 in): 1:29.15; 1:6.25; 1:13.71; 1:6.25; 1:50.42

Vertical Grade Length: 11.36m; 57.13m; 30.35m; 72.89m; 21.83m

Vertical Curve Length: L 10.00; L 10.00; L 10.00; L 10.00

Vertical Curve Radius: R 79.56; R 114.88; R 114.88; R 71.34

DATUM R.L.302.00

CHAINAGE	EXISTING GROUND CENTRELINE LEVEL	+ FILL DEPTH - CUT DEPTH	FINISHED LEVEL AT CENTRELINE
0.00	323.57	0.00	323.57
6.36	324.79	-1.00	323.79
10.00	325.94	-1.95	323.99
11.36	326.19	-2.07	324.11
16.36	326.36	-1.61	324.76
20.00	326.73	-1.39	325.34
28.88	326.38	0.38	326.76
30.00	326.39	0.55	326.94
40.00	328.73	-0.19	328.54
50.00	330.47	-0.33	330.14
60.00	331.95	-0.21	331.74
63.50	332.71	-0.41	332.30
64.91	333.01	-0.49	332.52
68.50	333.65	-0.66	332.99
70.00	333.74	-0.58	333.16
73.50	333.36	0.10	333.46
80.00	333.52	0.42	333.94
89.65	334.39	0.25	334.64
90.00	334.40	0.27	334.67
93.85	334.57	0.38	334.95
98.85	334.84	0.59	335.42
100.00	334.99	0.57	335.56
103.85	335.72	0.39	336.11
110.00	337.34	-0.24	337.10
120.00	339.24	-0.54	338.70
130.00	340.98	-0.68	340.30
131.72	341.31	-0.73	340.57
140.00	342.78	-0.88	341.90
144.19	343.39	-0.82	342.57
150.00	344.25	-0.75	343.50
153.09	344.60	-0.60	343.99
160.00	345.30	-0.20	345.10
166.74	345.54	0.63	346.18
170.00	345.90	0.72	346.62
171.74	346.29	0.51	346.80
176.74	347.31	-0.24	347.07
180.00	347.83	-0.69	347.14
190.00	348.04	-0.70	347.34
193.57	348.21	-0.81	347.41

Hz Scale 1:1000 @ A3
Vert Scale 1:500 @ A3

DRIVEWAY 1 - LONGSECTION

Notes

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APPLICANT: Simon Laming

COMPRISED IN: RT OT203/280

TERRITORIAL AUTHORITY: Queenstown Lakes District Council

LAND DISTRICT: Otago

TOTAL AREA: 23.5046ha — DATE: 4/3/24

Drawing Title

Longsection and Details

538 Wanaka-Mt Aspiring Road

Prepared for

Resource Consent

Plan Revisions

REV.	DESCRIPTION	DATE
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B	DESIGN UPDATED	19/8/24
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SCALE: 1:1000 @ A3

DATUM & LEVEL: Lindis Peak 2000

REVISION	DRAWING REFERENCE	Sheet
C	X4069_S3	3 of 4

SURVEYED	DATE	CHECKED	DATE
-	-	LW	19/8/24
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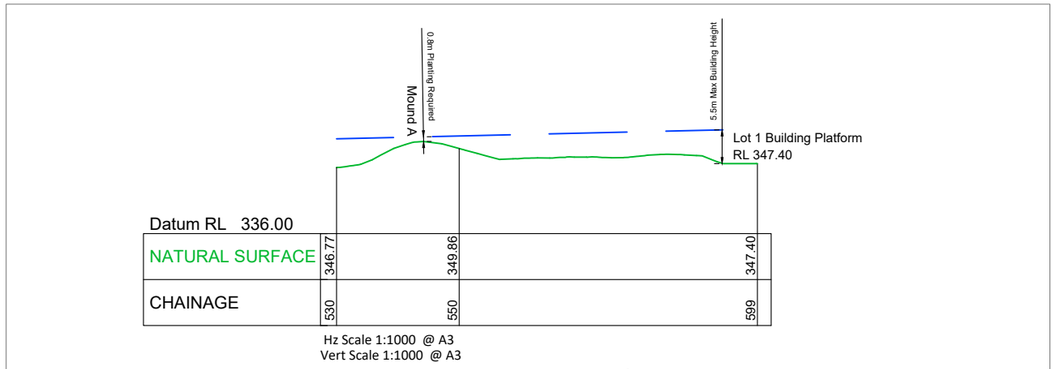
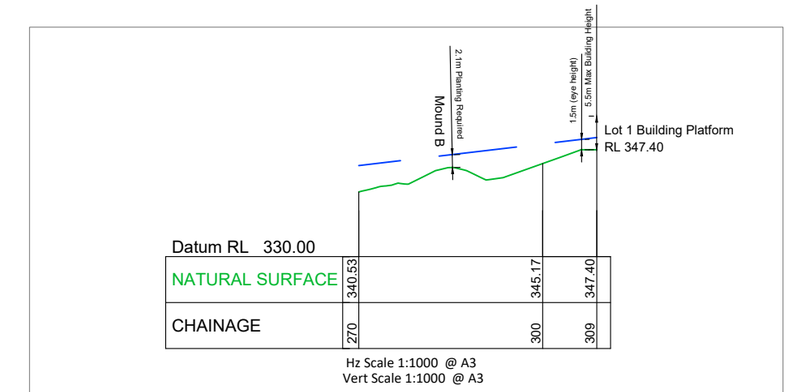


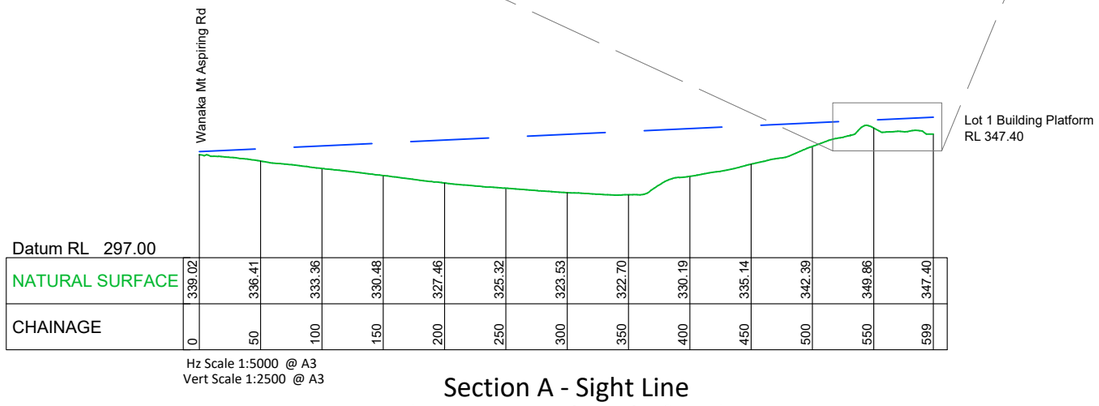
Hz Scale 1:1000 @ A3
Vert Scale 1:1000 @ A3

Section A - Sight Line (Aspiring Road to Platform)



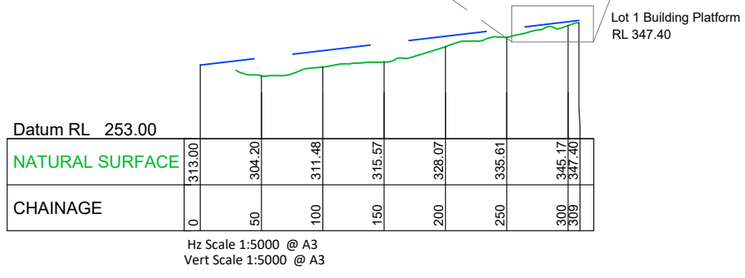
Hz Scale 1:1000 @ A3
Vert Scale 1:1000 @ A3

Section B - Sight Line (Lot 3 DP 549904 House to Platform)



Hz Scale 1:5000 @ A3
Vert Scale 1:2500 @ A3

Section A - Sight Line (Aspiring Road to Platform)



Hz Scale 1:5000 @ A3
Vert Scale 1:5000 @ A3

Section B - Sight Line (Lot 3 DP 549904 House to Platform)

Notes

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TERRITORIAL AUTHORITY
Queenstown Lakes District Council

LAND DISTRICT
Otago

TOTAL AREA	*DATE*
23.5046ha	4/3/24

Drawing Title

Sight line Section

538 Wanaka-Mt Aspiring Road

Prepared for

Resource Consent

Plan Revisions

REV.	DESCRIPTION	DATE
B	ORIGINAL ISSUE	19/8/24

SCALE
1:1000 @ A3

DATUM & LEVEL
Lindis Peak 2000

REVISION	DRAWING REFERENCE	Sheet
B	X4069_S4	4 of 4

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-	-	LW	19/8/24
DRAWN	DATE	APPROVED	DATE
S.L.	14/5/24	SL	19/8/24

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Level 2, Brownston House
21 Brownston Street
Wānaka 9305
Ph: (03) 443 5577
Email: contact@southernland.co.nz

Laming Subdivision
By email: Simon Laming

19 August 2024 Job Ref: X4069

Dear Simon,

Laming Subdivision

538 Wānaka – Mount Aspiring Road, Wānaka

Infrastructure Report

1. Introduction

1.1. General

Southern Land Ltd has been engaged by Simon Laming to undertake an assessment of the infrastructure required for a proposed two Lot subdivision at 538 Wānaka – Mount Aspiring Road, Wānaka.

This report will assess the infrastructure requirements of the proposed development and will identify any relevant site constraints. Our assessment is based on the requirements of Queenstown Lakes District Council (QLDC) as set out in their Land Development and Subdivision Code of Practice 2020 (COP 2020).

1.2. The Site

The proposed development (the 'site') is situated at 538 Wānaka – Mount Aspiring Road, Wānaka. The site is legally described as Section 6 Block XIII Lower Wānaka SD and covers approximately 23.5046ha. The site located on the lake side of the Wānaka – Mount Aspiring Road and slopes from the road down to the Lake. The top half of the site is gently sloping paddocks, it then rises to a low angle ridge which runs into the site from the south and ends at a low angle gully at the northern boundary. From the ridge the land slopes down over a couple of terraces to Lake Wānaka. There is an unformed road parcel known as "Lake Road" that abuts the northern boundary and runs down the to Lake, it is currently used as pedestrian access linking the Millenium Track to the Roy's Peak carpark.

There is an existing house located at the eastern end of the site, on one of the terraces above the Lake. The house is accessed by a 900m long driveway that runs along the northern boundary of the site, parallel to Lake Road.

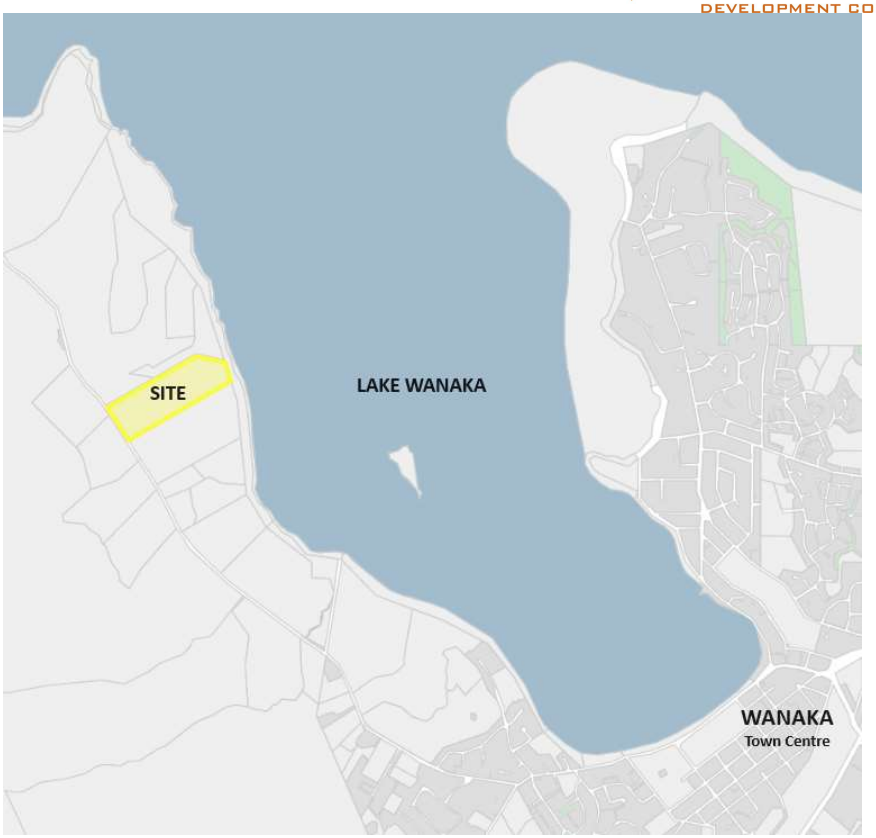

Figure 1: Location Map

There are no water bodies or drainage features located within the site. There is an existing drain and pond on the property north of Lake Road, this is the local low point which then drains via a stream down into Lake Wānaka.

1.3. Existing Infrastructure Summary

As the site is rural there are very few existing services. The extent of the existing infrastructure in the vicinity of the site is summarised below;

Roading

- There is a 900m long, single lane gravel driveway to the existing house.

Stormwater

- There is no existing stormwater infrastructure, beyond culverts under the existing driveway.

Wastewater

- The existing house has a septic tank and wastewater disposal field.

Water Supply

- The existing house has two 30,000l water tanks.

Electricity

- The existing house is supplied by and power cable in the driveway. This runs to a transformer ~20m west of the house.

Telecommunications

- The existing house is serviced by copper telecommunications cable from Wānaka – Mount Aspiring Road.

2. Earthworks

Earthworks are required to install passing bays on the existing driveways, construct the new driveway into the proposed building platform, forming the building platform and also to construct landscaping screening mounds.

2.1. Geotechnical

A geotechnical and soakage assessment was undertaken for proposed building site. The assessment undertook 4 testpits and one soakage pit around the proposed building platform. From this testing temporary and permanent batter slopes were recommended and these have been adopted in the earthworks design. (**Appendix B**).

2.2. The Development

Earthworks is required to form the new driveway and building platform as well as constructing the passing bays along the existing driveway and upgrading the intersection with Mt Aspiring Road.

The earthworks design indicates that topsoil stripping and earthworks operations will extend over an area of approximately 4,400m^2, with total cut of 2,150m^3 and fill of 2,150m^3.

2.3. Construction Monitoring

Topsoil stripping, assessment of underlying soils, and testing and certification fill will be carried out by the clients nominated geotechnical professional in accordance with NZS4431:1989.

2.4. Erosion and Sediment Control

An environmental management plan (EMP) **(Appendix E)** has been prepared in accordance with QLDC's Guidelines for Environmental Management Plans (2019). The site is deemed low risk a short form EMP has been provided with this report.

3. Roading

3.1. General

QLDC's COP 2020 provides guidance for proposed roading layouts, widths, grades, facilities, and design parameters. The following road characteristics are proposed for the development, which are generally in accordance *Table 3.3 – Road Design Standard* of QLDC COP 2020. Refer to **Appendix A** for the scheme plan and earthworks drawing set which shows the concept roading layout and cross sections.

Table 1: Typical Development Road Characteristics

Road No.	QLDC Classification	Road Width (Legal)	Carriageway Width (Formed)	Kerb Type	Camber
1, 2	E1	6m	• 2.5 m (typical) • Passing bay required every 100m if visibility is available from Bay to Bay. If visibility is not available, passing bays every 50m. • Total shoulder 0.5m, sealed	Swale	Twin 3%

3.2. Gradient and Shape

The longitudinal grade of the proposed driveway has been designed in accordance with the QLDC's COP 2020 and typically range from 5 - 16.67% to tie in with the proposed contours of the site.

The proposed driveway will intersect with the existing driveway at the eastern end of the straight. There is Right of Way easement proposed over the existing driveway on Lot 1 in favour of Lot 2. The new driveway climbs through two corners up to the proposed building platform. Passing bays are provided along the driveway in the two straight sections.

3.3. Pavements

The proposed driveway will be gravel construction with a 150mm AP40 basecourse.

3.4. Roading Features

The existing driveway intersection with the Wānaka – Mount Aspiring Road is required to be upgraded to meet Diagram 8 - Access Design, from the QLDC PDP Transport chapter.

Stormwater

3.5. Design Considerations and Objectives

Stormwater will from the road will be captured in roadside swales, culverts will be installed along the driveway as required to maintain natural run-off water courses. Culverts sizing and location will be determined as part of the detailed design, post consent.

The run-off from the proposed house will be handled by a soak pit. The geotechnical report has specific recommendations as the soakage rate is low due to shallow rock. As the soak pit will not be designed until building consent phase it is recommended that the geotechnical report is referenced by a Consent Notice to ensure that the recommendations are complied with.

4. Wastewater

4.1. Existing Wastewater Infrastructure

The existing house has a septic tank and disposal field. These services will be contained with Lot 1.

4.2. Proposed Wastewater Infrastructure

Wastewater from the proposed building platform will be designed under the NZBC for a proposed house on the site in the future. It is recommended that the design of the wastewater disposal field is undertaken in accordance with the Geotechnical Report recommendations and be designed by a suitably qualified professional.

5. Water Supply

5.1. Existing Water Network

The existing house is supplied for water that is pumped up from Lake Wānaka. The pipe rises from the Lake across the recreation reserve land, in easements A & B DP 431125, it then crosses the corner of Lake Road and enters the site in the northeast corner of the site. Once in the site the pipe rises to two 30,000l water tanks at the end of the ridge.

5.2. Proposed Water Infrastructure

The water supply for the proposed building platform will come from the existing tanks. Additional tanks will likely be required to provide the potable water and fire fighting requirements for a new dwelling on the site. The tank capacity requirements will be determined during the detailed design, post consent.

The fire fighting requirements will generally fall under FW2 SNZ 4509:2008, which requires 45,000l of static water storage for firefighting. This can service up to two hydrants. A solution for the proposed building platform would be to provide a hydrant near the house with a hardstand area at the top of the driveway, this would comply with SNZ 4509:2008. Alternatively, the future dwelling on the building platform could be serviced by a sprinkler system. The most appropriate option cannot be anticipated before the house is designed; therefore, it is recommended that a consent notice requiring that any future dwelling has firefighting provisions in accordance with SNZ 4509:2008.

6. Utilities

6.1. Power

Electricity is provided to the existing house from Mt Aspiring Road, it ends at an existing transformer above the existing house. This transformer will likely have capacity to provide electricity to the new building platform. This will be determined in the detailed design phase.

Confirmation from Aurora Energy that the development can be serviced with a power supply is attached in **Appendix C**.

6.2. Telecommunications

There is an existing telecommunications connection provided to the existing house. The existing telecommunications infrastructure is copper and now obsolete. It is cost prohibitive to install a new fibre connection to the proposed building platform therefore it is proposed that telecommunications are supplied via mobile or satellite services. This is proposed to be detailed in a Consent Notice. Attached is a letter from Chorus to show that the site can be serviced with a telecommunications supply **(Appendix D)**.

Yours sincerely
Southern Land

Sam Lynds
Licensed Cadastral Surveyor

BSurv (hons) MS+SNZ CSNZ

APPENDIX A

Scheme Plan and Earthworks Drawings

NOTES:
- Boundary data sourced from DP 24014 & DP 549904.
- Abuttal data sourced from LINZ XML
- Aerial Imagery is indicative only and has not been orthorectified

Application as Notified 111

Lot 3
DP 549904

Lake
Wanaka

Lot 2
DP 549904

LOT 1
18.83 Ha

LOT 2
4.67 Ha

Section 6
Blk XIII
Lower Wanaka SD

Lot 1
DP 24014

Section 12 Blk XIII
Lower Wanaka SD

Section 15
Block XIII

LAKE ROAD

WANAKA - MT ASPIRING ROAD

Right of Way Easement

Section A - Sight Line

LUC Class 3

LUC Class 6

Passing Bay
Every 100m

Passing Bay
Every 50m

Passing Bays
Every 100m

Passing Bays
Every 100m

See Diag. 'A'

For intersection
Details, See Sheet 3

577.13
441.51
179.09
92.20
42.09
98.89
164.78
210.10
141.44
263.15
(850.71)
202.24
385.32

0 40 80 120 160 200
Scale 1: 3,000 (m)

MEMORANDUM OF EASEMENTS

PURPOSE	SHOWN	BURDENED LAND	BENEFITED LAND
Right of Way	A	LOT 1	LOT 2
Right to Store Water	C	LOT 1	LOT 2

NOTE:
Additional Easements will be required for electricity and water
Area 'B' shows the proposed Building Platform

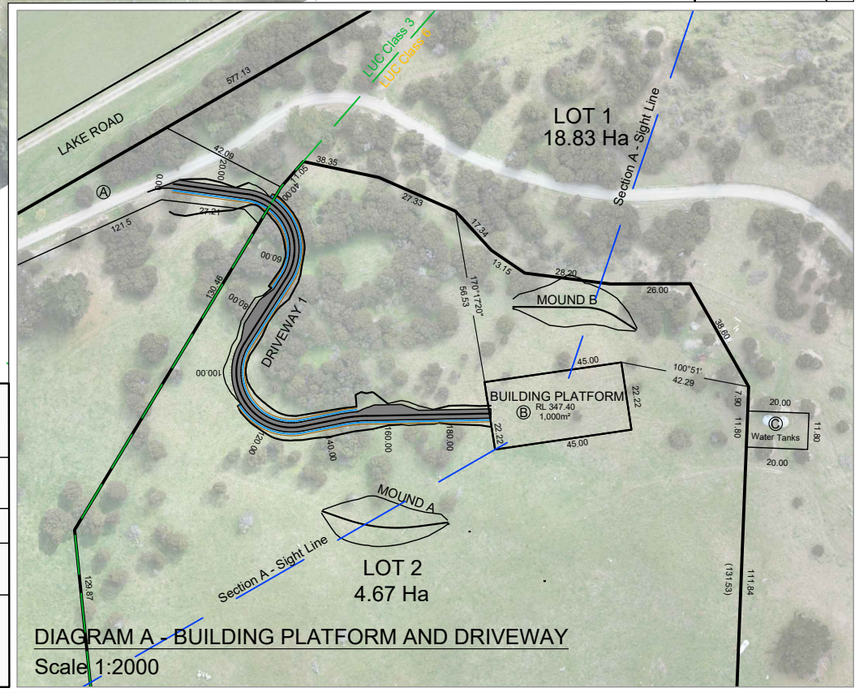

DIAGRAM A - BUILDING PLATFORM AND DRIVEWAY
Scale 1:2000

Notes

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TOTAL AREA	DATE
23.5046ha	4/3/24

Drawing Title

Lots 1 & 2 Being a Proposed Subdivision of Section 6 Block XIII Lower Wanaka SD

538 Wanaka-Mt Aspiring Road

Prepared for

Resource Consent

Plan Revisions

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1:3000 @ A3

DATUM & LEVEL
Lindis Peak 2000

REVISION	DRAWING REFERENCE	Sheet
B	X4069_S1	1 of 6

SURVEYED	DATE	CHECKED	DATE
-	-	LW	19/8/24
DRAWN	DATE	APPROVED	DATE
S.L.	14/5/24	SL	19/8/24

NOTES:
- Boundary data sourced from DP 24014 & DP 549904.
- Abuttal data sourced from LINZ XML
- Aerial Imagery is indicative only and has not been orthorectified

Application as Notified 112

LUC Class 3
LUC Class 6

LAKE ROAD

577.13

LOT 1
18.83 Ha

Section A - Sight Line

42.09
20.00
11.05
38.35
27.33
17.34
13.15
28.20
26.00
38.60
40.00
0.00
27.21
121.5
60.00
130.46
80.00
DRIVEWAY 1
100.00
56.53
170°17'20"
MOUND B
Max Fill
3.1m
45.00
100°51'
42.29
BUILDING PLATFORM
B
RL 347.40
1,000m²
22.22
22.22
45.00
Max Cut
3.0m
7.90
11.80
20.00
C
Water Tanks
11.80
20.00
120.00
140.00
160.00
180.00
MOUND A
Section A - Sight Line
LOT 2
4.67 Ha
(131.53)
111.84

CUT

<-3.0 to -3.0 m	
-3.0 to -2.5 m	
-2.5 to -2.0 m	
-2.0 to -1.5 m	
-1.5 to -1.0 m	
-1.0 to -0.5 m	
-0.5 to -0.2 m	
-0.2 to -0.0 m	
0.0 to 0.2 m	
0.2 to 0.5 m	
0.5 to 1.0 m	
1.0 to 1.5 m	
1.5 to 2.0 m	
2.0 to 2.5 m	
2.5 to 3.0 m	
3.0 to >3.0 m	

FILL

EARTHWORKS VOLUMES

Total Cut	2150 m³
Total Fill	2150 m³
Balance	0 m³
Stripping Area	4400 m²

LEGEND

Major Contour 2m
Minor Contour 1m

Notes

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APPLICANT
Simon Laming

COMPRISED IN
RT OT203/280

TERRITORIAL AUTHORITY
Queenstown Lakes District Council

LAND DISTRICT
Otago

TOTAL AREA
23.5046ha

DATE
4/3/24

Drawing Title
Earthworks Plan
538 Wanaka-Mt Aspiring Road

Prepared for
Resource Consent

Plan Revisions

REV.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	4/3/24
B	DESIGN UPDATED	19/8/24

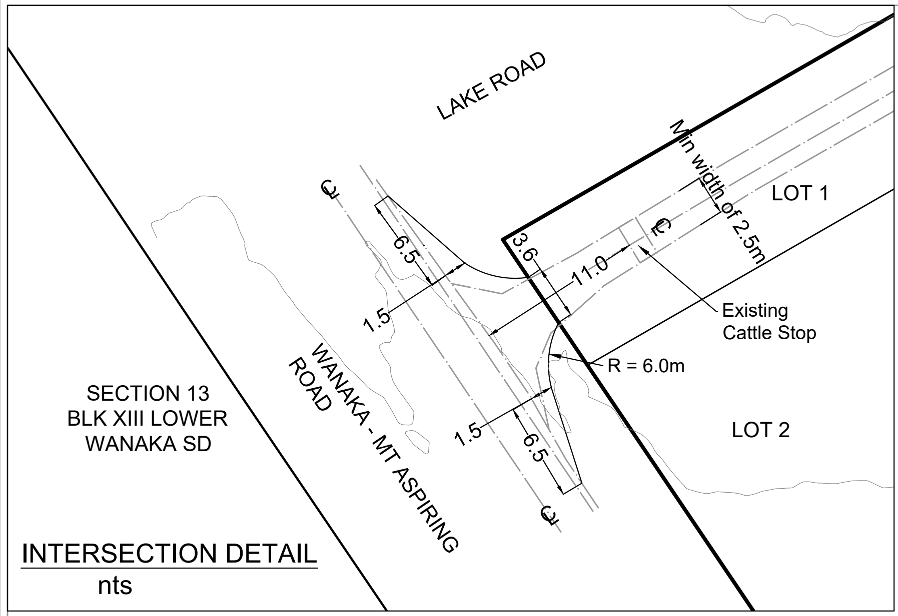
SCALE
1:750 @ A3

DATUM & LEVEL
Lindis Peak 2000

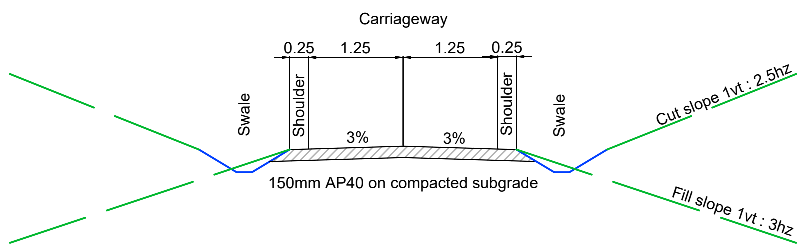
REVISION	DRAWING REFERENCE	Sheet
B	X4069_S2	2 of 6

SURVEYED	DATE	CHECKED	DATE
-	-	LW	19/8/24
DRAWN	DATE	APPROVED	DATE
S.L.	14/5/24	SL	19/8/24

Application as Notified 113



INTERSECTION DETAIL
nts



TYPICAL DRIVEWAY SECTION
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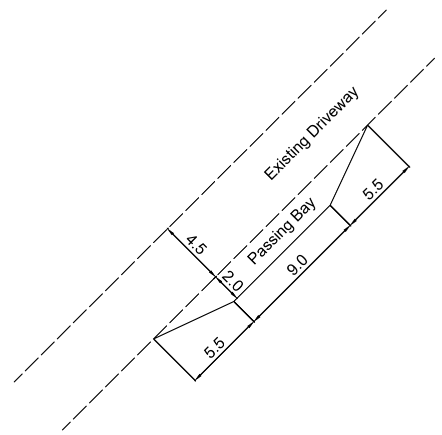
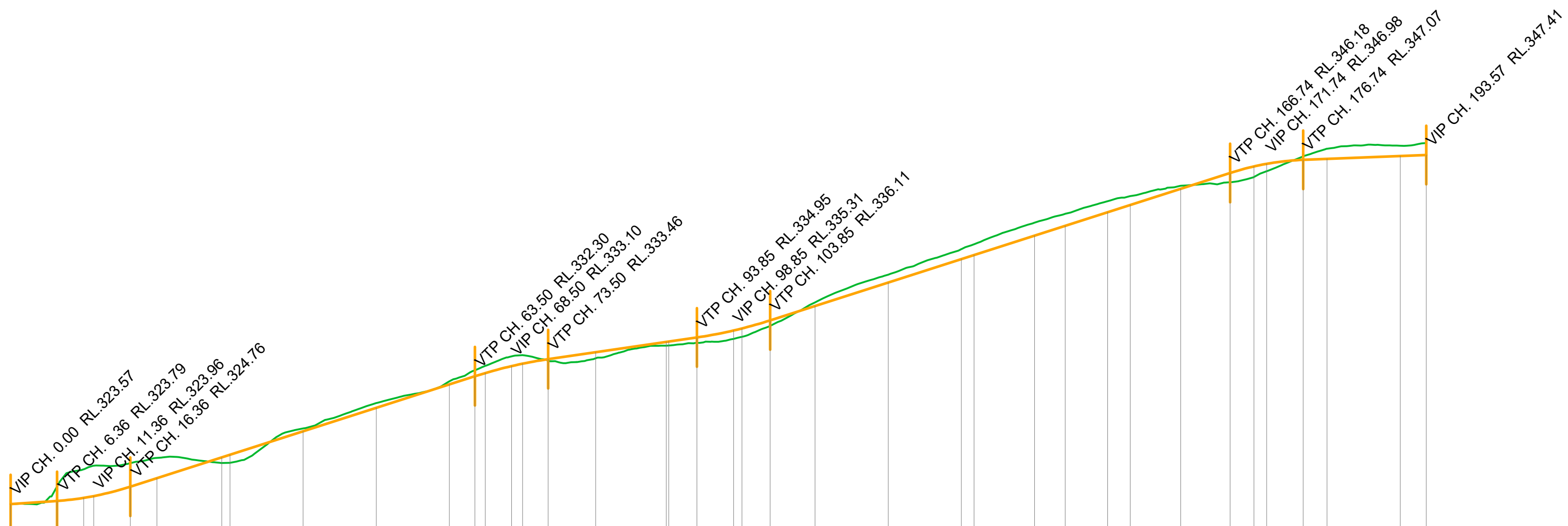


PASSING BAY DETAIL
nts



Horiz Curve Data: R18.00m; R-18.00m; R50.00m

Vertical Geometry Grade (%) / Vertical Geometry Grade (1 in) / Vertical Grade Length:

Grade (%)	Grade (1 in)	Grade Length
3.43%	1:29.15	11.36m
16.00%	1:6.25	57.13m
7.30%	1:13.71	30.35m
16.00%	1:6.25	72.89m
1.98%	1:50.42	21.83m

Vertical Curve Length / Vertical Curve Radius:

Vertical Curve Length	Vertical Curve Radius
L 10.00	R 79.56
L 10.00	R 114.88
L 10.00	R 114.88
L 10.00	R 71.34

DATUM R.L.302.00

CHAINAGE	EXISTING GROUND CENTRELINE LEVEL	+ FILL DEPTH - CUT DEPTH	FINISHED LEVEL AT CENTRELINE
0.00	323.57	0.00	323.57
6.36	324.79	-1.00	323.79
10.00	325.94	-1.95	323.99
11.36	326.19	-2.07	324.11
16.36	326.36	-1.61	324.76
20.00	326.73	-1.39	325.34
28.88	326.38	0.38	326.76
30.00	326.39	0.55	326.94
40.00	328.73	-0.19	328.54
50.00	330.47	-0.33	330.14
60.00	331.95	-0.21	331.74
63.50	332.71	-0.41	332.30
64.91	333.01	-0.49	332.52
68.50	333.65	-0.66	332.99
70.00	333.74	-0.58	333.16
73.50	333.36	0.10	333.46
80.00	333.52	0.42	333.94
89.65	334.39	0.25	334.64
90.00	334.40	0.27	334.67
93.85	334.57	0.38	334.95
98.85	334.84	0.59	335.42
100.00	334.99	0.57	335.56
103.85	335.72	0.39	336.11
110.00	337.34	-0.24	337.10
120.00	339.24	-0.54	338.70
130.00	340.98	-0.68	340.30
131.72	341.31	-0.73	340.57
140.00	342.78	-0.88	341.90
144.19	343.39	-0.82	342.57
150.00	344.25	-0.75	343.50
153.09	344.60	-0.60	343.99
160.00	345.30	-0.20	345.10
166.74	345.54	0.63	346.18
170.00	345.90	0.72	346.62
171.74	346.29	0.51	346.80
176.74	347.31	-0.24	347.07
180.00	347.83	-0.69	347.14
190.00	348.04	-0.70	347.34
193.57	348.21	-0.81	347.41

Hz Scale 1:1000 @ A3
Vert Scale 1:500 @ A3

DRIVEWAY 1 - LONGSECTION

Notes

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A DIVISION OF THE NEW ZEALAND INSTITUTE OF SURVEYORS

APPLICANT: Simon Laming
COMPRISED IN: RT OT203/280
TERRITORIAL AUTHORITY: Queenstown Lakes District Council
LAND DISTRICT: Otago
TOTAL AREA: 23.5046ha | DATE: 4/3/24

Drawing Title
Longsection and Details
538 Wanaka-Mt Aspiring Road

Prepared for
Resource Consent

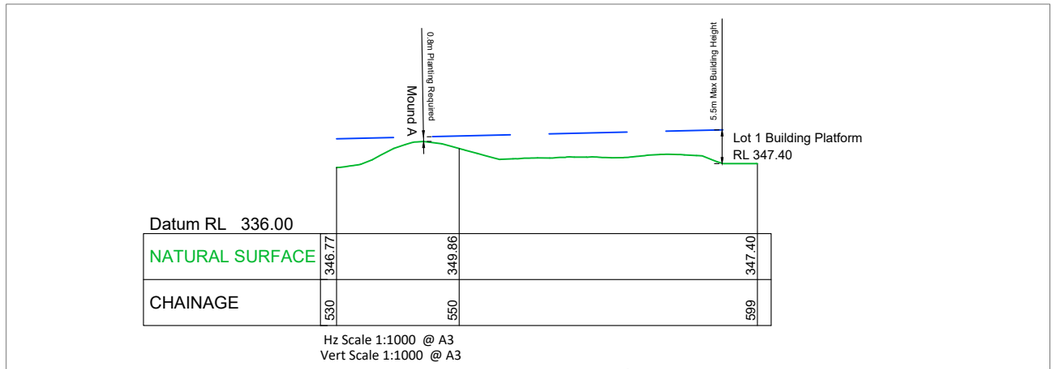
Plan Revisions

REV.	DESCRIPTION	DATE
A	ORIGINAL ISSUE	4/3/24
B	DESIGN UPDATED	19/8/24

SCALE: 1:1000 @ A3
DATUM & LEVEL: Lindis Peak 2000

REVISION	DRAWING REFERENCE	Sheet
B	X4069_S3	3 of 6

SURVEYED	DATE	CHECKED	DATE
-	-	LW	19/8/24
DRAWN	DATE	APPROVED	DATE
S.L.	14/5/24	SL	19/8/24



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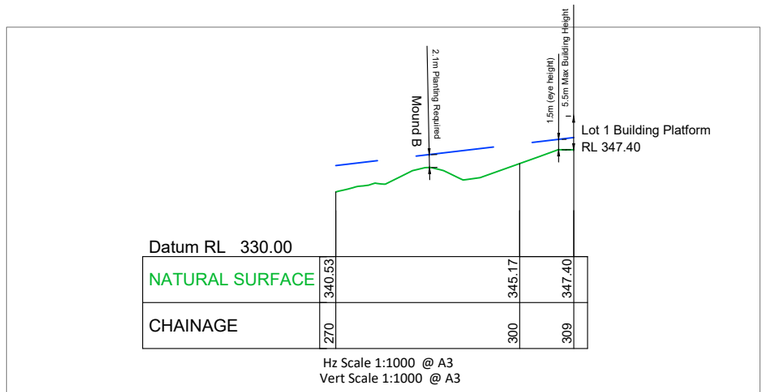
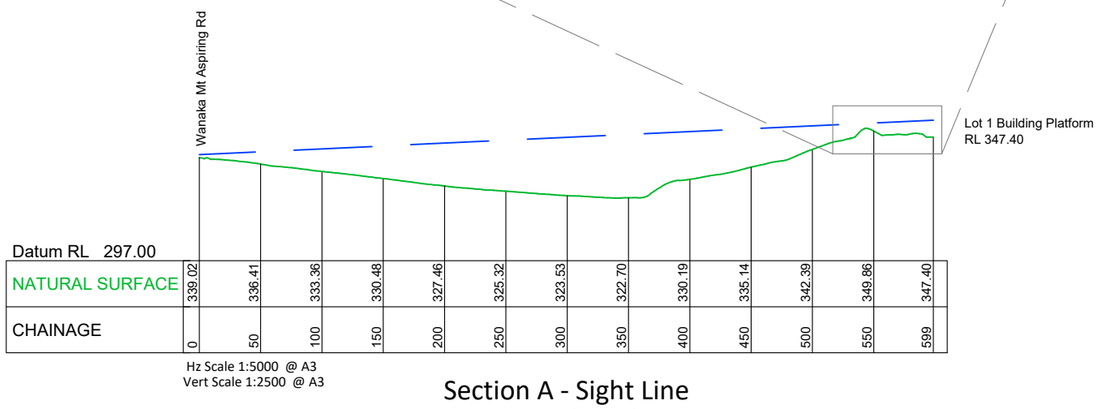
Vert Scale 1:1000 @ A3

Section A - Sight Line
(Aspiring Road to Platform)



Hz Scale 1:1000 @ A3
Vert Scale 1:1000 @ A3

Section B - Sight Line
(Lot 3 DP 549904 House to Platform)



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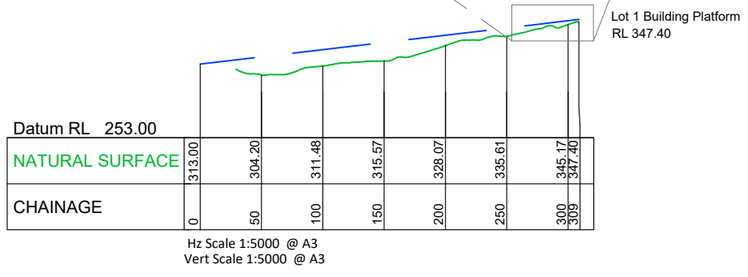
Vert Scale 1:2500 @ A3

Section A - Sight Line
(Aspiring Road to Platform)



Hz Scale 1:5000 @ A3
Vert Scale 1:5000 @ A3

Section B - Sight Line
(Lot 3 DP 549904 House to Platform)

Notes

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APPLICANT
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COMPRISED IN
RT OT203/280

TERRITORIAL AUTHORITY
Queenstown Lakes District Council

LAND DISTRICT
Otago

TOTAL AREA	*DATE*
23.5046ha	4/3/24

Drawing Title

Sight line Section

538 Wanaka-Mt Aspiring Road

Prepared for

Resource Consent

Plan Revisions

REV.	DESCRIPTION	DATE
B	ORIGINAL ISSUE	19/8/24

SCALE
1:1000 @ A3

DATUM & LEVEL
Lindis Peak 2000

REVISION	DRAWING REFERENCE	Sheet
B	X4069_S4	4 of 6

SURVEYED	DATE	CHECKED	DATE
-	-	LW	19/8/24
DRAWN	DATE	APPROVED	DATE
S.L.	14/5/24	SL	19/8/24

NOTES:
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- Abuttal data sourced from LINZ XML
- Aerial Imagery is indicative only and has not been orthorectified

Application as Notified 115

81m to Pond

60m to Pond

Existing grassed swale to divert water along driveway. Silt fence or Mulch weirs to be installed in swale to intercept silt runoff

Existing grassed swale

Cut temporary run off diversion drain from the table drain to the vegetated paddock

Cut temporary run off diversion drain from the table drain to the vegetated paddock

CWD

CUT

<-3.0	to	-3.0	m
-3.0	to	-2.5	m
-2.5	to	-2.0	m
-2.0	to	-1.5	m
-1.5	to	-1.0	m
-1.0	to	-0.5	m
-0.5	to	-0.2	m
-0.2	to	-0.0	m
0.0	to	0.2	m
0.2	to	0.5	m
0.5	to	1.0	m
1.0	to	1.5	m
1.5	to	2.0	m
2.0	to	2.5	m
2.5	to	3.0	m
3.0	to	>3.0	m

FILL

EARTHWORKS VOLUMES

Total Cut	2000 m³
Total Fill	1980 m³
Balance	20 m³
Stripping Area	4400 m²

LEGEND

Major Contour 2m
Minor Contour 1m

Notes

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TERRITORIAL AUTHORITY
Queenstown Lakes District Council

LAND DISTRICT
Otago

TOTAL AREA	*DATE*
23.5046ha	4/3/24

Drawing Title

Erosion Sediment Control Plan

538 Wanaka-Mt Aspiring Road

Prepared for

Resource Consent

Plan Revisions

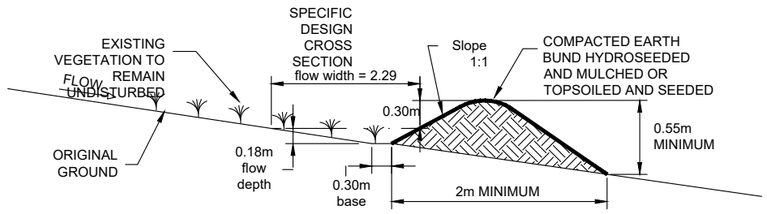
REV.	DESCRIPTION	DATE
B	ORIGINAL ISSUE	19/8/24

SCALE
1:1000 @ A3

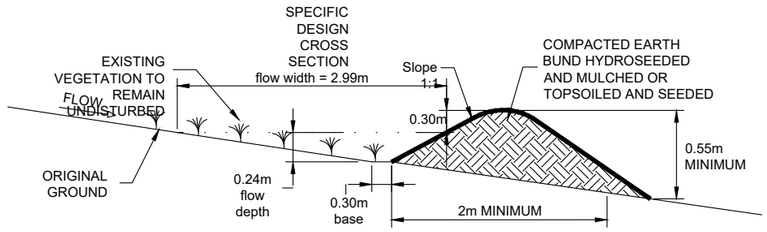
DATUM & LEVEL
Lindis Peak 2000

REVISION	DRAWING REFERENCE	Sheet
B	X4069_S5	5 of 6

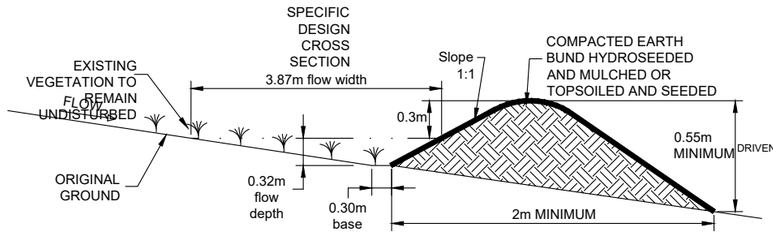
SURVEYED	DATE	CHECKED	DATE
-	-	LW	19/8/24
DRAWN	DATE	APPROVED	DATE
S.L.	4/3/24	SL	19/8/24



TYPE 1 - (≤ 1Ha Catchments)

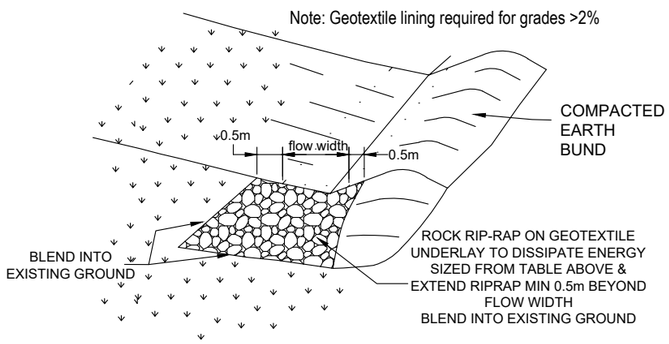


TYPE 2 - (1-2Ha Catchments)

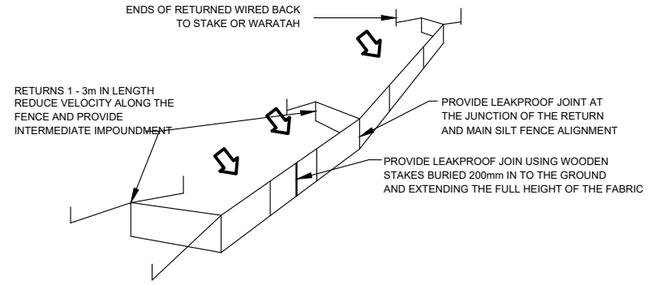


TYPE 3 - (2-4Ha Catchments)

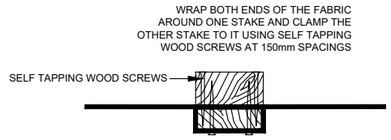
CLEANWATER RUNOFF DIVERSION BUND CROSS SECTIONS



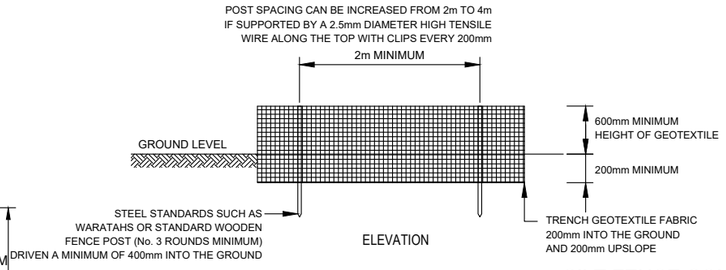
RIPRAP PROTECTION CLEANWATER DRAIN OUTLET



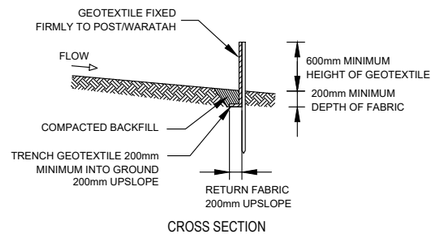
PERSPECTIVE VIEW



STANDARD FABRIC JOINT

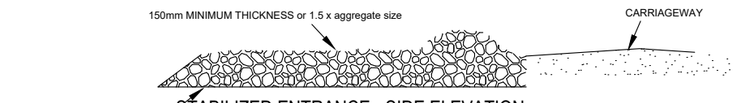


ELEVATION

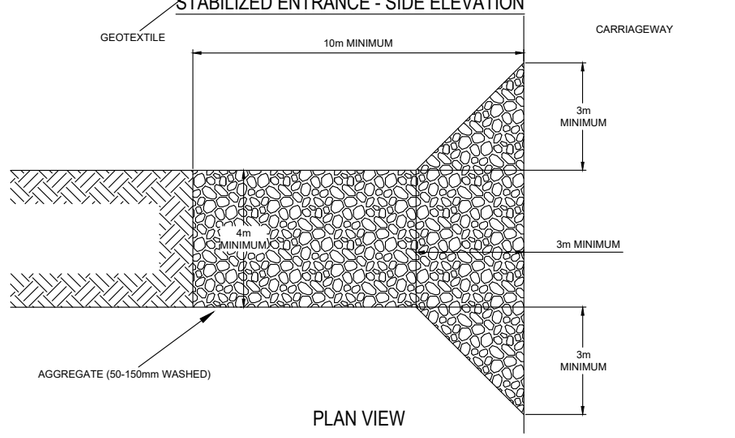


CROSS SECTION

SILT FENCE CONSTRUCTION



STABILIZED ENTRANCE - SIDE ELEVATION



PLAN VIEW

STABILIZED CONSTRUCTION ENTRANCE

Notes

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TERRITORIAL AUTHORITY
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LAND DISTRICT
Otago

TOTAL AREA	*DATE*
23.5046ha	4/3/24

Drawing Title

Erosion Sediment Control Standard Details

538 Wanaka-Mt Aspiring Road

Prepared for

Resource Consent

Plan Revisions

REV.	DESCRIPTION	DATE
B	ORIGINAL ISSUE	4/3/24

SCALE
NTS

DATUM & LEVEL
Lindis Peak 2000

REVISION	DRAWING REFERENCE	Sheet
B	X4069_S6	6 of 6

SURVEYED	DATE	CHECKED	DATE
-	-	LW	19/8/24
DRAWN	DATE	APPROVED	DATE
S.L.	4/3/24	SL	19/8/24

APPENDIX B

Geotechnical Report (GeoSolve)

GeoSolve Ref: 230197
12 June 2024

Simon Laming
311 Thames Street
Oamaru, 9400

Geotechnical and Soakage Assessment for Resource Consent 538 Wanaka-Mount Aspiring Road, Wanaka

Introduction

This report presents the results of a geotechnical and soakage investigation and assessment completed for a proposed residential building platform at 538 Wanaka-Mount Aspiring Road, Wanaka. The investigations were undertaken to provide a geotechnical ground model, foundation recommendations and parameters and soil permeability parameters to assist preliminary engineering design. Recommendations for earthworks construction and general geotechnical suitability recommendations for the building platform are also provided.

This report is sufficient to support resource consent application to council and to inform preliminary structural design requirements. Further geotechnical review and assessment is recommended at building consent and dwelling design stage.

Photo 1 – Site photo looking west over the proposed building platform location.

The investigations were completed for Simon Laming in accordance with GeoSolve Ltd.'s proposal dated 29th March 2023, which outlines the scope of work and conditions of engagement.

To complete this assessment GeoSolve have undertaken the following works:

- A site inspection;
- A review of the development plans;
- 6 test pits extending to between 2.2 and 2.7 m below ground level (bgl) with associated Scala penetrometer testing;
- 1 soakage test at 1.0 m bgl, and;
- A desktop review of existing information in adjacent areas and QLDC natural hazard mapping.

Proposed Development

The Southern Land resource consent earthrworks plan provided depicts the formation of a single residential building platform with a total area of 1000 m^2.

Based on the earthworks plans provided we understand that maximum cut and fill volumes of 3.0 and 3.1 m respectively, are required to establish the proposed building platform RL of 347.40 m. We understand that cut and fill earthworks will also be required to establish the driveway and proposed landscaping mounds.

We understand that onsite stormwater and wastewater disposal is required as part of the development. GeoSolve understands that the stormwater and wastewater disposal area is proposed northwest of the building platform.

Site Description and Topography

The proposed building platform is located within an existing rural residential site, approximately 5 km northwest of central Wanaka. Lake Wanaka is located approximately 300 m east of the proposed building platform and is topographically approximately 67 m lower.

Figure 1 – Location of the proposed building platform in relation to surrounding site features (Source: Google Earth).

The building platform is situated in an area of undulating hills between Roys Peak to the southwest and Lake Wanaka to the east. The area of undulating hills is separated from the

Roys Peak foothills by a 500 m wide area of flat ground. The building platform slopes at approximately 1(v):4(h) towards north-northeast.

The building platform is generally covered in grass and is surrounded by scattered Kanuka trees and is typically used for sheep grazing. Access to the site is via a private gravel driveway off Wanaka-Mount Aspiring Road. No access to the building platform has been formed.

Minor evidence of existing earthworks was observed around the proposed building platform location including the formation of a narrow farm track and a small excavation used to dump farm debris.

The site is naturally free draining, and no spring flows were evident on the surface of the building platform during the investigation.

Subsurface Conditions

Geological Setting

The site is located in the Wanaka Basin, a valley feature formed predominately by glacial advances. Published references indicate last glacial advance occurred in the region about 18,000 years ago.

The glaciations have left glacial deposits comprising glacial till, and outwash gravel over ice-scoured schist bedrock. Post-glacial times have been dominated by erosion of the bedrock by local watercourses and deposition of alluvial fan deposits. Lacustrine sediments were deposited in Lake Wanaka and beach gravel around the shoreline as post-glacial lake levels fell.

No active fault traces are known to exist in the immediate vicinity of the site; however, a significant seismic risk exists in the region due to the rupture of the Alpine Fault which is located along the west coast of the South Island. There is a high probability that an earthquake with a magnitude of up to Mw8 will occur on the Alpine Fault within the next 50 years. This would subject the Wanaka region to strong ground shaking.

Stratigraphy

The subsurface stratigraphy observed during the building platform investigations typically comprises:

- 0.1-0.3 m of **topsoil**, overlying;
- 0.6-1.1 m of **colluvium,** overlying;
- 1.1-1.9 m of **glacial till**, overlying;
- 0.1 m + of **schist bedrock.**

Topsoil was observed at the surface of all test pits to depths of between 0.1-0.3 m below ground level (bgl). Topsoil typically comprises dark brown, organic silty SAND with roots and rootlets and was moist to wet.

Colluvium was observed underlying topsoil all test pits to depths of between 0.8-1.3 m bgl and comprises moist to wet, stiff, sandy SILT with some to trace gravel, minor to trace cobbles and trace boulders, rootlets and organic inclusions.

Glacial till was observed underlying the colluvium in all test pits to depths of between 2.1-2.6 m bgl. Glacial till typically comprises moist to wet, very stiff to hard, sandy SILT and SILT with minor to trace sand and gravel, cobbles and trace boulders, dense silty SAND with trace

gravel, cobbles and boulders and SAND with some to minor silt, minor to trace gravel and trace cobbles and boulders.

Schist bedrock was observed underlying the glacial till in all test pits from depths of between 2.1-2.6 m bgl. The schist bedrock typically comprises**,** moderately strong, slightly weathered psammitic SCHIST with very thin laminated foliation.

No groundwater was observed in any of the test pits during investigations, the soils were predominantly in a dry to wet condition. Based on nearby borehole data the regional groundwater table is expected to be well below the building platform level.

Full details of the observed subsurface stratigraphy can be found within the test pit logs contained in Appendix B.

Geological Hazards

Slope Stability

No mapped existing slope stability hazards are present within the building platform area and no evidence of slope instability was observed during the site investigation. The building platform is gently to moderately sloping and is set back approximately 300 m from the crest of the slope adjacent to Lake Wanaka.

Global slope instability is not considered a hazard to the proposed building platform. No further assessment is considered necessary.

Seismic

A severe seismic risk is present in the region as discussed in the geological setting and appropriate allowance should be made for seismic loading during detailed design of the proposed building, foundations and retaining walls.

Alluvial Fan

The building platform is not subject to alluvial fan hazard due to its elevated position. No further assessment is considered necessary.

Liquefaction

There is no liquefaction hazard due to the shallow depth to schist bedrock. No further assessment is considered necessary.

Engineering Considerations

The recommendations and opinions contained in this report are based upon ground investigation data obtained at discrete locations and historical information held on the GeoSolve database. The nature and continuity of subsoil conditions away from the investigation locations is inferred and cannot be guaranteed.

Site Preparation

During the earthworks operations all topsoil, organic matter, uncontrolled fill, and other unsuitable materials should be removed from the construction areas in accordance with the recommendations of NZS 4431:2022.

The fine-grained colluvium and glacial till soils are susceptible to moisture and will weaken if subject to rainfall, frost or vehicle trafficking. Exposure to the elements should be limited for fine-grained soils. Covering the shallow foundation soils with 50 mm of site concrete or 200 mm of granular engineered fill should be carried out immediately following excavation to reduce degradation due to vehicle trafficking, frost, rain and surface run-off. Topsoil and unsuitable soil stripping and subsequent earthworks should be undertaken only when a suitable interval of fair weather is expected.

To minimise the effects of freeze-thaw cycles, all shallow foundations in soils should be founded a minimum of 0.4 m below the adjacent finished ground surface.

Engineered fill that is utilised as bearing for foundations should be placed and compacted in accordance with the recommendations of NZS 4431:2022 and certification provided to that effect.

Geotechnical Parameters

Table 1 provides a summary of the recommended geotechnical design parameters for the soil and rock materials expected to be encountered during construction across the building platform.

Table 1 – Recommended geotechnical design parameters

Unit	Thickness (m)	Bulk Density γ (kN/m^3)	Effective Cohesion c' (kPa)	Effective Friction ϕ' (deg)	Elastic Modulus E (kPa)	Poissons Ratio ν
Topsoil	0.3-0.4	16	To be removed below building platform.			
Colluvium (stiff, sandy SILT with some to trace gravel, minor to trace cobbles)	0.6-1.1	18	0	31	5,000-10,000	0.3
Glacial till (very stiff to hard and dense, sandy SILT with minor to trace gravel and cobbles, silty SAND, SAND with some to minor silt, minor to trace gravel, SILT with minor sand and gravel)	1.1-1.9	19	0-2	34	20,000	0.3
Schist Bedrock (moderately strong psammitic SCHIST)	0.1 m +	26	10-100+	30	100,000	0.25
Schist Bedrock Defects (Mass strength primarily controlled by defects)	NA	NA	0 (along defect)	25 (along defect)	NA	0.2

Excavations

Due to the sloping nature of the building platform, some earthworks are expected to be required. If large cuts into the rock are proposed further investigations are recommended to assess rock cut stability.

Recommendations for temporary and permanent batter slope angles in dry ground are described below in Table 2. Slopes that are required to be steeper than those described below should be structurally retained or subject to specific geotechnical design.

All slopes should be periodically monitored during construction for signs of instability and excessive erosion, and, where necessary, corrective measures should be implemented to the satisfaction of a geotechnical engineer or engineering geologist.

Table 2 – Recommended batters for temporary and permanent cuts up to 3 m high in dry ground

Material Type	Recommended Maximum Batter Angle for Temporary Cut Slopes less than 3 m high formed in Dry Ground (horizontal to vertical)	Recommended Maximum Batter for Permanent Cuts Less than 3 m high formed in Dry Ground (horizontal to vertical)
	Dry Ground	Dry Ground
Topsoil and Colluvium	1.5H: 1.0V	3.0H: 1.0V
Glacial Till	1.0H: 1.0V	2.5H: 1.0V
Schist Bedrock	0.5H: 1.0V	1.0H: 1.0V

Permanent batter slopes in wet soils are not expected, however if wet slopes are encountered, they should be inspected on a case-by-case basis by a geotechnical engineer to confirm any specific recommendations provided as needed. Drainage installation and/or retaining may be required to maintain stability of slopes effected by groundwater seepage.

Ground Retention

All retaining walls should be designed by a Chartered Professional Engineer using the geotechnical parameters recommended in Table 1 of this report. Due allowance should be made during the detailed design of all retaining walls for forces such as surcharge due to the sloping ground surface behind retaining walls, potential groundwater runoff, seismic and traffic loads.

Groundwater was not identified in the test pits but has the potential to develop following completion of the earthworks, in particular as a result of heavy or prolonged rainfall. To ensure potential groundwater seeps and flows are properly controlled behind the retaining walls, the following recommendations are provided:

- A minimum 0.3 m width of durable free draining granular material should be placed behind all retaining structures.
- A heavy duty non-woven geotextile cloth, such as Bidim A19, should be installed between the natural ground surface and the free draining granular material to prevent siltation and blockage of the drainage media.
- A heavy-duty (TNZ F/2 Class 500) perforated pipe should be installed within the drainage material at the base of all retaining structures to minimise the risk of

excessive groundwater pressures developing. This drainage pipe should be connected to the permanent piped storm water system.

- Comprehensive waterproofing measures should be provided to the back face of all basement retaining walls to stop groundwater seepage into the finished buildings.

Foundations

Following the removal of topsoil, the underlying soils will comprise colluvium and glacial till. No foundation plans or finished floor levels have been provided to GeoSolve at this time, for completeness we have included the bearing capacity for colluvium and glacial till. The colluvium will provide a reduced bearing capacity and if not excavated will govern the bearing capacity for foundation design. The glacial till soil meets the bearing capacity requirements for "good ground" in accordance with NZS3604:2011.

Foundations on Colluvium

Figure 2 below summarises the recommended working stresses for shallow footings which bear upon colluvium. It should be noted that foundation working stresses presented on Figure 2 are governed by bearing capacity in the case of narrow footings and settlement in the case of wide footings.

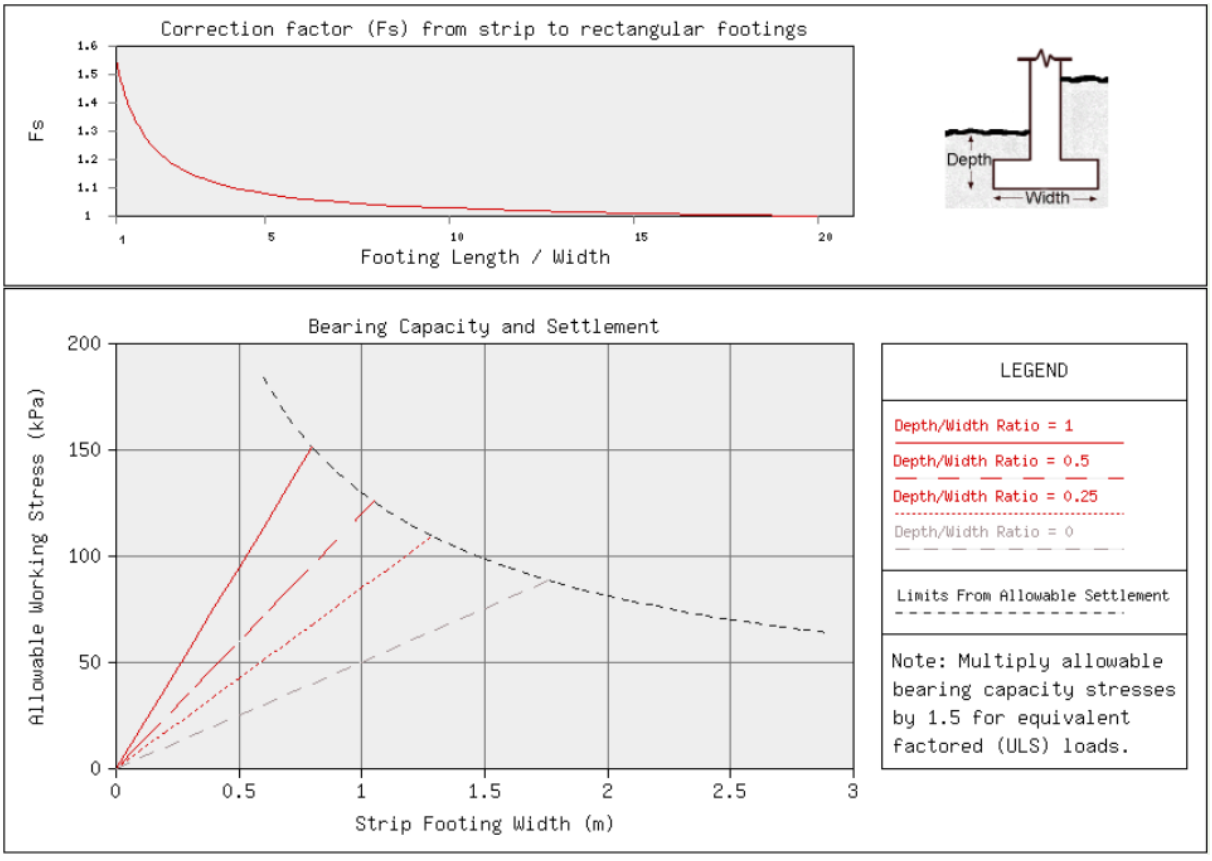

Figure 2 Recommended Bearing for Shallow Footings on Colluvium

From Figure 2 it can be seen an allowable working stress of approximately 70 kPa is recommended for a 0.4 m wide by 0.4 m deep footing that is founded upon colluvium. This

corresponds to a factored (ULS) bearing capacity of approximately 105 kPa and ultimate geotechnical bearing capacity of 210 kPa.

Foundations on Glacial Till

Figure 3 below summarises the recommended working stresses for shallow footings which bear upon glacial till or engineered fill overlying the same, constructed in accordance with NZS4431:2022 and certification provided. It should be noted that foundation working stresses presented on Figure 3 are governed by bearing capacity in the case of narrow footings and settlement in the case of wide footings.

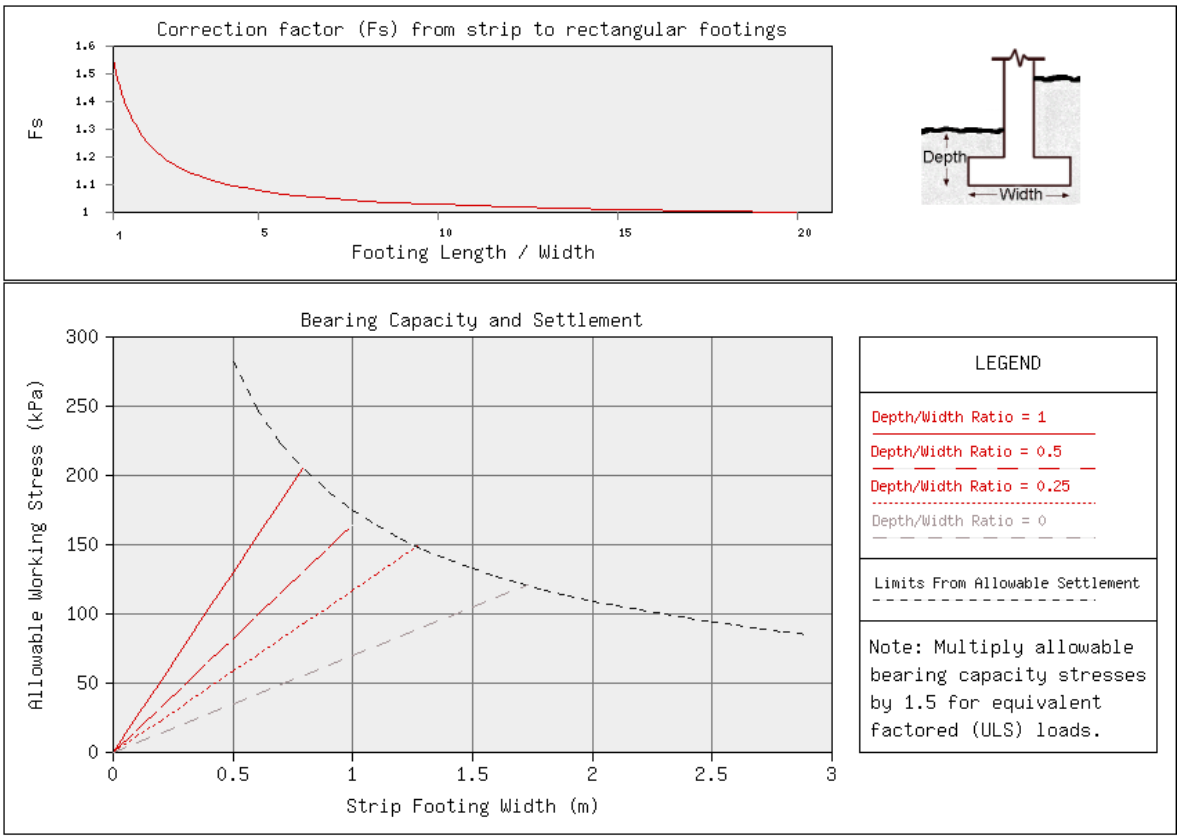

Figure 3 Recommended Bearing for Shallow Footings on Glacial Till or Engineered Fill overlying the same

From Figure 3 it can be seen an allowable working stress of approximately 100 kPa is recommended for a 0.4 m wide by 0.4 m deep footing that is founded upon glacial till or engineering fill overlying the same. This corresponds to a factored (ULS) bearing capacity of approximately 150 kPa and ultimate geotechnical bearing capacity of 300 kPa.

The glacial till soil meets the bearing capacity requirements for “good ground” in accordance with NZS3604:2011.

It should be noted that the bearing capacities presented above assume that the loads are vertical with no horizontal loads or moments applied to the foundations. Reduction factors to account for eccentric and/or horizontal loads can be provided during detailed design once loads are finalised. In addition, no allowances have been made for sloping ground in front of the footings. GeoSolve can provide further advice if required during the detailed design phase.

Settlement

Settlement and differential settlement of shallow foundations are expected to be within structurally acceptable limits providing the recommendations of the foundations section are followed and all unsuitable soil materials are undercut and replaced with engineered fill during construction.

Foundation Subsoil Inspection

It is recommended that the stripped building platform is inspected by a geotechnical engineer or engineering geologist to confirm all unsuitable soils have been removed from the platform and confirm that all geotechnical requirements for the adopted foundation design are met.

Inspection and testing (Scala penetrometers) should be completed along the footing alignments during construction to confirm the above values are applicable and that the soil has not been softened by weather or excavation. A smooth-edged bucket is recommended to undertake the excavation, so the founding soil is not loosened. Compaction with a minimum 400 kg plate compactor should follow all footing and slab excavations to compact soils loosened by the excavation process.

Site Subsoil Category

For detailed design purposes it is recommended the magnitude of seismic acceleration be estimated in accordance with the recommendations provided in NZS 1170.5:2004.

The building platform is considered to be Class B (rock site) in accordance with NZS 1170.5:2004 seismic provisions based on the test pit observations.

Stormwater Soakage

Assessment

On-site soakage testing was undertaken within SP1 as shown in Appendix A, Figure 1. The test procedure comprised filling an open pit with water to a set depth and recording the drop in level over time, i.e. a falling head test. The test was undertaken within the glacial till at 1 m below current ground level. The static groundwater level was not encountered during test pitting and is expected to lie at depth below the site. This will not influence the long-term infiltration rate at this site. Pre-soakage was undertaken prior to undertaking the soakage testing.

Design Recommendations

The test results are presented in Table 3 below and the soakage test results are attached in Appendix C.

Table 3: Calculated infiltration rate from onsite testing

Test	Depth (m)	Soil type at base of pit	Unfactored infiltration rate*
Soak Pit 1	1.0	Glacial Till	**14 mm/hr**
*Does not include a reduction factor of 0.5 to account for loss of soakage performance over time and soakage through the side walls			

To ensure the soak pits onsite are designed to provide suitable stormwater disposal during the design life of the system, we recommend that:

- The stormwater soakage pit is located northwest of the proposed building platform.
- The soakage pit design needs to consider the shallow depth of soil overlying schist bedrock, the base of the soakage pit should have >1 m of soil cover overlying schist rock.
- If the final soak pit location varies from the GeoSolve test location, then it is recommended that an additional test pit is completed prior to excavation of the full soak pit.
- The base of the pit be inspected by a geotechnical practitioner during construction.
- Due to the low soakage rate, if the designed soakage pit is too large for the proposed dwelling a storage system could be considered.
- Provision be included for long-term inspection and routine maintenance of the soakage system.
- An emergency overflow/overland flow path should be identified for extreme storm events where surcharging is possible.
- Due to the low soakage rate the overflow pathway should be considered during detailed design once the location of the soakage pit is confirmed.
- A 0.5 reduction factor should be applied to the value provided within Table 3 to account for loss of soakage performance over time.

Based on the observed soils onsite the following recommendations are provided to aid in wastewater disposal design:

- With respect to wastewater soakage to ground, in accordance with Table 5.1 AS/NZS 1547:2012, the soils are classified as Class 4, Massive. A QLDC Site and Soils Assessment has been completed and is attached in Appendix D. It is recommended that the onsite wastewater disposal system is designed by a suitably qualified professional.

Applicability

This report has been prepared for the benefit of Simon Laming with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

This report is suitable for resource consent application. Further geotechnical review and assessment is recommended at building consent and dwelling design stage.

Report prepared by:	Reviewed for GeoSolve Ltd by:
	
.....	.....
Emma Hutchinson	Fraser Wilson
Engineering Geologist	Senior Engineering Geologist

Attached:

Appendix A – Site Investigation Plan
Appendix B – Test Pit Logs
Appendix C – Soakage Results
Appendix D – QLDC Site Soils Assessment

Application as Notified 129

NOTES:
- Boundary data sourced from DP 24014 & DP 549904.
- Abuttal data sourced from LINZ XML
- Aerial Imagery is indicative only and has not been orthorectified

LAKE ROAD

LUC Class 4
LUC Class 6

LOT 1
18.83 Ha

Section A - Sight Line

DRIVEWAY 1

MOUND A

MOUND B

BUILDING PLATFORM
RL 347.40
1,000m²

Water Tanks

TP1
TP2
TP3
TP4
TP5
TP6
SP1

Max Fill
3.1m

Max Cut
3.0m

LOT 2
4.67 Ha

CUT

<-3.0	to	-3.0	m
-3.0	to	-2.5	m
-2.5	to	-2.0	m
-2.0	to	-1.5	m
-1.5	to	-1.0	m
-1.0	to	-0.5	m
-0.5	to	-0.2	m
-0.2	to	-0.0	m
0.0	to	0.2	m
0.2	to	0.5	m
0.5	to	1.0	m
1.0	to	1.5	m
1.5	to	2.0	m
2.0	to	2.5	m
2.5	to	3.0	m
3.0	to	>3.0	m

FILL

EARTHWORKS VOLUMES

Total Cut	2150 m³
Total Fill	2150 m³
Balance	0 m³
Stripping Area	4400 m²

LEGEND
- Major Contour 2m
- Minor Contour 1m

Key
- TP1 = Test Pit and Scala Penetrometer
- TP1 = Soakage Pit
- = Proposed Building Platform

Scale 1:1700
0 20 40 60 80 100 (m)

CADFILE:	Sketch 1.xar	DRAWN	ELH	06/2024
SCALE (AT A3 SIZE):	AS SHOWN	DRAFTING CHECKED	ELH	06/2024
PROJECT No:	230197	APPROVED	FAW	06/2024

GEOSOLVE
ENGINEERING CONSULTANTS
GEOTECHNICAL
WATER RESOURCES
PAVEMENTS

Simon Laming
Geotechnical and Soakage Assessment
538 Wanaka-Mount Aspiring Road, Wanaka
Site Investigation Plan

FIG No: APPENDIX A, FIGURE 1
REV. 1

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TEST PIT LOG

Application is Notified 1980

EXCAVATION NUMBER:
TP 1

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical		

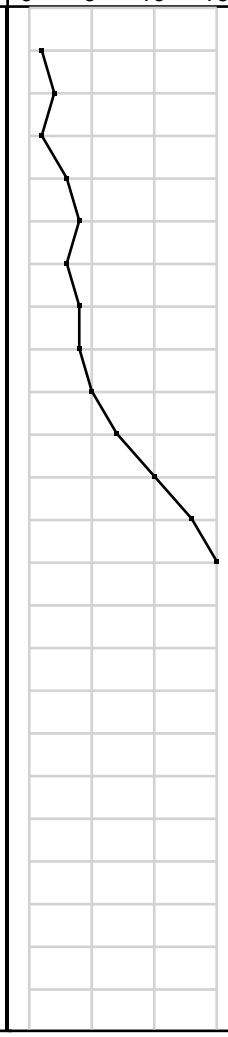
EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

Soil / Rock Type	Description	Depth (m)
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet.	0m – 0.3m
COLLUVIUM	Sandy SILT with trace of gravel, cobbles, boulders and rootlets; orange, dips with topography. Stiff; moist to wet; chaotic; sand, fine; gravel, medium to coarse, subangular to angular (schist); boulders up to 300 mm diameter.	0.3m – 0.9m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; grey with minor orange stain, dips with topography. Very stiff; moist; massive; sand, fine to medium; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 500 mm diamerer.	0.9m – 1.7m
GLACIAL TILL	Silty fine to medium SAND with trace of gravel, cobbles and boulders; grey with minor orange stain, dips with topography. Dense; moist; massive; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 500 mm diamerer.	1.7m – 1.8m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; brownish grey, dips with topography. Very stiff; moist; massive; sand, fine to medium; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 300 mm diamerer.	1.8m – 2.1m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; dark grey, dips with topography. Very stiff; moist to wet; massive; sand, fine to medium; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 300 mm diamerer.	2.1m – 2.3m
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered.	2.3m – 2.4m

Graphic Log

Groundwater / Seepage: NO SEEPAGE

Scala Penetrometer (Blows per 100mm)



Total Excavation Depth = 2.4 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

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TEST PIT LOG

Application is Notified (No)

EXCAVATION NUMBER:
TP 2

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical		

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

Soil / Rock Type	Description	Graphic Log	Depth (m)	Groundwater / Seepage	Scala Penetrometer (Blows per 100mm)
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet. 0m – 0.2m		0.0 – 0.2		
COLLUVIUM	Sandy SILT with trace of gravel, cobbles, boulders, rootlets and organic inclusions; orange brown, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, fine to coarse, subrounded to angular (schist); boulders up to 400 mm diameter. 0.8m		0.2 – 0.8		
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; grey, contact dipping 5 deg to N. Very stiff; moist; massive; sand, fine; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 400 mm diamerer. 1.7m		0.8 – 1.7		
GLACIAL TILL	Fine to medium SAND with minor silt and trace of gravels; grey, dips with topography. Dense; moist; massive; gravel, fine to medium, sub angular to sub rounded (schist). 1.9m		1.7 – 1.9		
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; dark grey, dips with topography. Very stiff; moist to wet; massive; sand, fine; gravel, fine to coarse, angular to sub rounded (schist). 2.6m		1.9 – 2.6		
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered. 2.7m		2.6 – 2.7	NO SEEPAGE	

0 5 10 15

Total Excavation Depth = 2.7 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

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TEST PIT LOG

EXCAVATION NUMBER:
TP 3

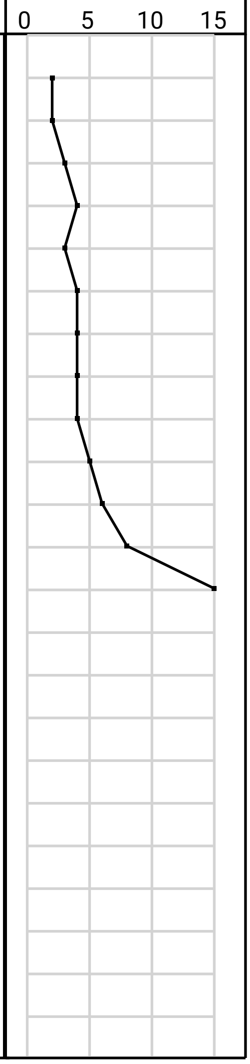
PROJECT:	538Wanaka-MountAspiringRoad	JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

Soil / Rock Type	Description	Depth
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet.	0m – 0.2m
COLLUVIUM	Sandy SILT with minor gravel and trace of cobbles, boulders and rootlets; orange, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, fine to medium, subrounded to angular (schist); boulders up to 150 mm diameter.	0.2m – 1.1m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; grey, dips with topography. Very stiff; moist; massive; sand, fine to medium; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 250 mm diamerer.	1.1m – 1.6m
GLACIAL TILL	Fine to medium SAND with some silt, minor gravel and trace of cobbles and boulders; grey, dips with topography. Dense; moist; massive; gravel, fine to medium, sub angular to sub rounded (schist).	1.6m – 2.1m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; dark grey, dips with topography. Very stiff; moist to wet; massive; sand, fine to medium; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 300 mm diamerer.	2.1m – 2.3m
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered.	2.3m – 2.4m

Groundwater / Seepage: NO SEEPAGE

Scala Penetrometer (Blows per 100mm)



Total Excavation Depth = 2.4 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

GEOSOLVE
ENGINEERING CONSULTANTS

TEST PIT LOG

Application Is Notified 1/08

EXCAVATION NUMBER:
TP 4

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical		

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

Soil / Rock Type	Description	Graphic Log	Depth (m)	Groundwater / Seepage	Scala Penetrometer (Blows per 100mm)
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet. (0m – 0.1m)		0.0 – 0.1		
COLLUVIUM	Sandy SILT with minor gravel and trace of cobbles, boulders and rootlets; orange, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, medium to coarse, subrounded to angular (schist); boulders up to 300 mm diameter. (0.1m – 0.9m)		0.1 – 0.9		
GLACIAL TILL	Sandy SILT with minor gravel and cobbles and trace of boulders; brownish grey, dips with topography. Very stiff to hard; moist; massive; sand, fine; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 400 mm diamerer. (0.9m – 2.1m)		0.9 – 2.1	NO SEEPAGE	
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered. (2.1m – 2.2m)		2.1 – 2.2		

0 5 10 15

Total Excavation Depth = 2.2 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

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TEST PIT LOG

Application is Notified 1964

EXCAVATION NUMBER: **TP 5**

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical		

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

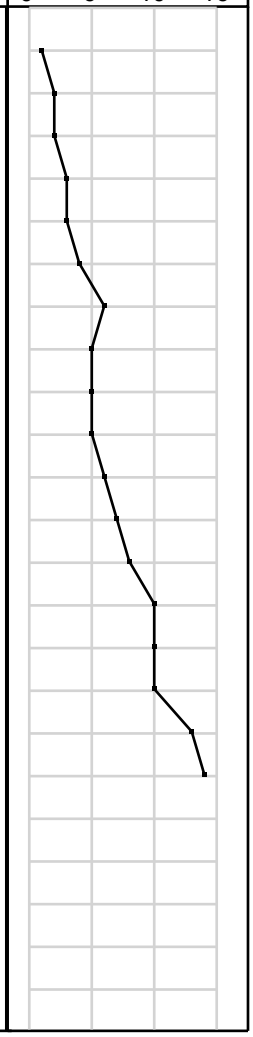
Soil / Rock Type	Description	Depth
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet.	0m – 0.3m
COLLUVIUM	Sandy SILT with trace of gravel, cobbles, boulders and rootlets; orange, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, medium to coarse, subangular to angular (schist); boulders up to 300 mm diameter.	0.3m – 1.2m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; grey, dips with topography. Very stiff; moist; massive; sand, fine; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 500 mm diamerer.	1.2m – 1.6m
GLACIAL TILL	Fine SAND with minor silt and trace of gravel, cobbles and boulders; grey, dips with topography. Dense; moist; massive; gravel, fine to coarse, sub angular to sub rounded (schist); boulders up to 400 mm diamerer.	1.6m – 2.1m
GLACIAL TILL	SILT with minor sand and gravel and a trace of cobbles and boulders; dark grey, dips with topography. Very stiff; moist to wet; massive; sand, fine; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 300 mm diamerer.	2.1m – 2.3m
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered.	2.3m – 2.4m

Graphic Log

Depth (m): 0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4

Groundwater / Seepage: NO SEEPAGE

Scala Penetrometer (Blows per 100mm)



Total Excavation Depth = 2.4 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

GEOSOLVE
ENGINEERING CONSULTANTS

TEST PIT LOG

Application is Notified (S95)

EXCAVATION NUMBER:
TP 6

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:		INCLINATION:			

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

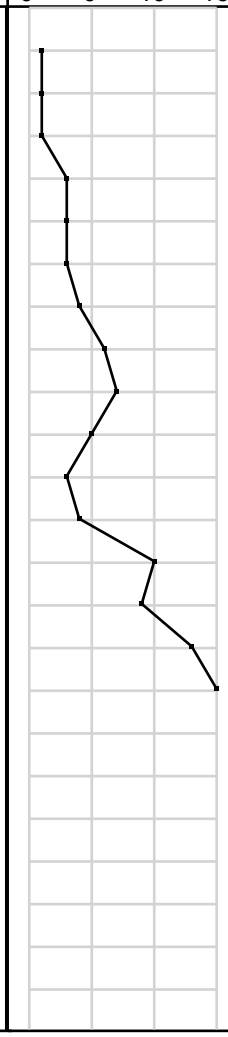
Soil / Rock Type	Description	Depth
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet.	0m – 0.25m
COLLUVIUM	Sandy SILT with a trace of gravel and organic inclusions; orange, dips with topography. Stiff; moist to wet; chaotic; sand, fine; gravel, fine.	0.25m – 0.7m
COLLUVIUM	Sandy SILT with some gravel and minor cobbles; orange, dips with topography. Stiff; moist; chaotic; sand, fine to medium; gravel, fine to coarse, sub rounded to angular (schist).	0.7m – 0.85m
COLLUVIUM	Sandy SILT with a trace of gravel; orange, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, fine to medium, sub rounded to angular (schist).	0.85m – 1.3m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; brownish grey, dips with topography. Very stiff; moist; massive; sand, fine; gravel, fine to medium, sub rounded to angular (schist), boulders up to 500 mm diamerer.	1.3m – 1.9m
GLACIAL TILL	Silty fine to medium SAND with a trace of gravel, cobbles and boulders; brownish grey, dips with topography. Dense; moist; massive; gravel, fine to medium, sub rounded to angular (schist), boulders up to 300 mm diamerer.	1.9m – 2.3m
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered.	2.3m – 2.4m

Graphic Log

Depth (m): 0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4

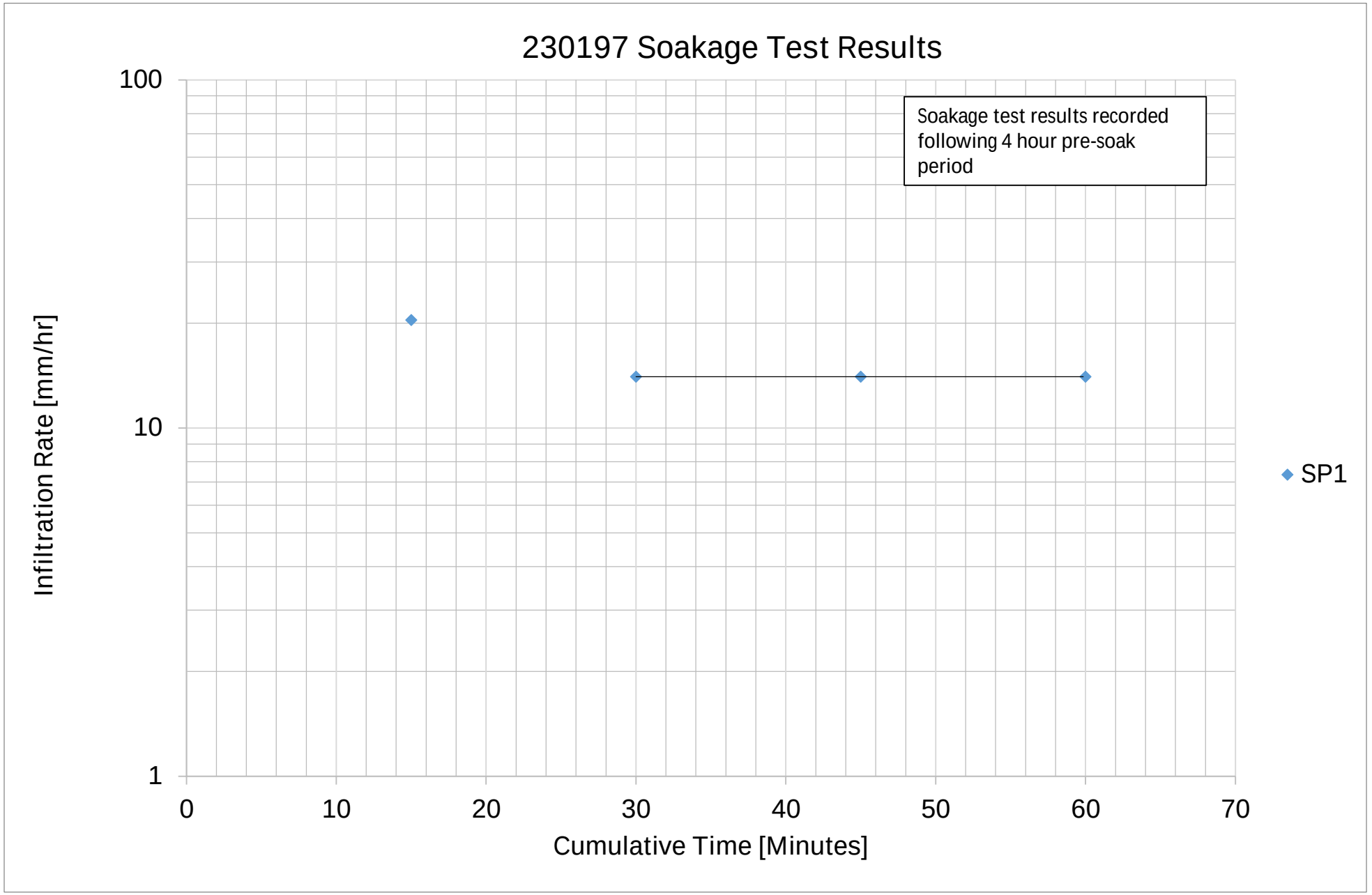
Groundwater / Seepage: NO SEEPAGE

Scala Penetrometer (Blows per 100mm)



Total Excavation Depth = 2.4 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1


230197 Soakage Test Results
Soakage test results recorded following 4 hour pre-soak period
Infiltration Rate [mm/hr]
100
10
1
0
10
20
30
40
50
60
70
Cumulative Time [Minutes]
SP1

Onsite Wastewater Disposal Site & Soils Assessment

QUEENSTOWN LAKES DISTRICT COUNCIL

Use for Subdivision or Land Use Resource Consent

The design standard for waste water treatment and effluent disposal systems is AS/NZS 1547:2012. All references in this form relate to this standard.

Applications should provide sufficient information to demonstrate that all lots will be capable of accommodating an on-site system.

Site Description

Property Owner: Simon Laming

Location Address: 538 Wanaka - Mount Aspiring Road, Wanaka

Legal Description (eg Lot3 DP1234) : Section 6 Block XIII Lower Wanaka SD

List any existing consents related to waste disposal on the site: _____

General description of development / source of waste water:: Formation of a single building platform for a residential dwelling

The number and size of the lots being created: _____

Site Assessment (refer to Tables R1 & R2 for setback distances to site features)

Land use _____

Topography Sloping

Slope angle 15°

Aspect north - northeast

Vegetation cover grass

Areas of potential ponding NA

Ephemeral streams NA

Drainage patterns and overland paths _____

Flood potential (show with return period on site plan) Not flood prone

Distance to nearest water body 300m (east) Lake Wanaka

Water bores with 50m (reference ORC Maps) NO

Other Site Features Existing dwelling to the east of proposed building platform

Slope stability assessment details – summarise any areas unsuitable for waste water irrigation. (Attach report if applicable): No slope stability issues identified

(Highest potential) Depth to ground water:

Summer -5.8

Winter -5.8

Information Source F40/0173

What is the potential for waste water to short circuit through permeable soils to surface and / or ground water? No potential

Soil Investigation (Appendix C)

Field investigation date: 3/5/2023

Number of test pit bores (C3.5.4): 6 testpits + 1 soakpit

Soil investigation addendum to be attached that includes a plan showing test pit or bore location, log results and photos of the site profile.

If fill material was encountered during the soil investigation state how this will impact on the waste water system:

No fill encountered during investigations.

Average depth of topsoil: 0.1 - 0.3 m

Indicative permeability (Appendix G) : 14 mm/h

Percolation test method (refer to B6 for applicability) : Open soak test pit (attach report if applicable)

Soil Category *(Table 5.1)*	Soil Texture *(Appendix E)*	Drainage	Tick One
1	Gravel and sands	Rapid	
2	Sandy loams	Free	
3	Loams	Good	
4	Clay loams	Moderate	✓
5	Light clays	Moderate to slow	
6	Medium to heavy clays	Slow	

Reasons for placing in stated category:

Soil, grain size and permeability during testing. + Depth to bedrock.

Loading rate, DLR (Table L1):

Explanation for proposed loading rate:

Recommendations from site and soils assessment

Specify any design constraints
Specify any areas unsuitable for location of the disposal field
Specify any unsuitable treatment and/or disposal systems
Propose suitable mitigation to enable successful effluent treatment

Recommend that the disposal system is located proximal to the testing location.

Depth to schist bedrock to be considered during detailed design of wastewater disposal system

Attachments Checklist

- [x] Copy of existing consents
- [x] Soil investigation addendum
- [x] To scale site plan, the following must be included on the plan:
  - Buildings
  - Boundaries
  - Retaining Walls
  - Embankments
  - Water bodies
  - Flood potential
  - Other septic tanks / treatment systems
  - Water bores
  - Existing and proposed trees and shrubs
  - Direction of ground water flow
  - North arrow

Note that an Otago Regional Council (ORC) consent may also be required to discharge domestic waste water to land if any of the following apply:

- Daily discharge volume exceeds 2,000 litres per day
- Discharge will occur in a groundwater protection zone
- Discharge will occur within 50 metres of a surface water body (natural or manmade)
- Discharge will occur within 50 metres of an existing bore/well
- Discharge will result in a direct discharge into a drain/water ace/ground water
- Discharge may runoff onto another persons' property

If any of these apply then we recommend that you correspond with the ORC;

Otago Regional Council
"The Station" (upstairs)
Cnr. Camp and Shotover Streets
P O Box 958
Queenstown 9300

Tel: 03 442 5681

I believe to the best of my knowledge that the information provided in this assessment is true and complete. I have the necessary experience and qualifications as defined in Section 3.3 AS/NZS 1547:2012 to undertake this assessment in accordance with the requirements of AS/NZS 1547:2012:

Company: GeoSolve Limited

Email: emma@geosolve.co.nz

Phone number: +64 211044989

Name: Emma Hutchinson

Signature: 

Date: 18/5/2023

APPENDIX C

Utilities Confirmation of Power Supply

AURORA ENERGY LIMITED
PO Box 5140, Dunedin 9058
PH 0800 22 00 05
WEB www.auroraenergy.co.nz

05/03/2024

SAM LYNDS
SOUTHERN LAND

Sent via email only: sam@southernland.co.nz

Dear Sam,

ELECTRICITY SUPPLY AVAILABILITY FOR A PROPOSED TWO LOT SUBDIVISION
538 MOUNT ASPIRING ROAD, WANAKA. SECTION 6 BLOCK XIII LOWER WANAKA SD

Thank you for your inquiry outlining the above proposed development.

Subject to technical, legal and commercial requirements, Aurora Energy can make a Point of Supply[1] (PoS) available for this development.

Disclaimer

This letter confirms that a PoS **can** be made available. This letter **does not** imply that a PoS is available now, or that Aurora Energy will make a PoS available at its cost.

Next Steps

To arrange an electricity connection to the Aurora Energy network, a connection application will be required. General and technical requirements for electricity connections are contained in Aurora Energy's Network Connection Standard. Connection application forms and the Network Connection Standard are available from www.auroraenergy.co.nz.

Yours sincerely

Niel Frear
CUSTOMER INITIATED WORKS MANAGER

[1] Point of Supply is defined in section 2(3) of the Electricity Act 1993.

APPENDIX D

Utilities Confirmation of Telecommunications Supply

Sam Lynds

From: Chorus Property Development Do Not Reply <npdnoreply@chorus.co.nz>
Sent: Tuesday, 5 March 2024 12:11 PM
To: npdnoreply@chorus.co.nz
Subject: Chorus 10771191 : We can service your development

Follow Up Flag: Follow up
Flag Status: Flagged

Hi

Development address: 538 Wanaka-Mount Aspiring Road , Glendhu Bay, Queenstown-Lakes District, 9382

This email is to confirm that Chorus can provide our fibre network to your development. An indicative cost for the work we would need to do (noting that this excludes costs for any work you may be required to do inside the site boundary) is presented in the below notes:

A high level estimate to extend our fibre network to your development is in excess of $100,000 Incl. GST, as this would need to come approx. 3600m from Wanaka Mount-Aspiring Road.

Please note: The communications technology available to serve customers in our rural areas is rapidly changing. Copper is no longer the only option for customers, and is in some cases, not the best option. New Zealand runs on fibre, and the UFB roll-out has gone past 87 per cent of Kiwis. We would like to extend fibre further to enable more Kiwis to receive the best technology available. We will not be investing in extending the copper network further.

If you would like this formalised into a quote, then please log in to your account and let us know. If you need to amend the connection numbers or provide updated plans, you can also do that via your account.

Chorus New Property Development Team

Please do not reply to this email as this inbox is not monitored. For any follow up queries please visit www.chorus.co.nz/develop-with-chorus or log in to

your account. If you do not yet have an account with us, you will need to create an account to view your job progress and documentation.

APPENDIX E

Environmental Management Plan

ENVIRONMENTAL MANAGEMENT PLAN FOR LOW RISK SITES

Project Address: Laming Subdivision 538 Wānaka – Mount Aspiring Road, Wānaka	**QLDC Consent Number (if applicable):** TBC
Brief Project Description: Construction of a building platform and driveway in the rural zone.	
Nearest Sensitive Receptors: Ponds to the north of site. Approx. 50m.	

Purpose

This document is for use for sites that are deemed through resource consent to be of low environmental risk. These are also designed for the construction industry to provide guidance to construction environmental management on small scale jobs with low environmental risk. This document is a guide for operators to help control environmental effects such as storm water, erosion and sediment run off into nearby waterways and storm water infrastructure, manage dust, noise, litter pollution and other construction related effects to neighbours and the environment.

Administrative requirements

Roles and responsibilities

ROLE	NAME	PHONE NUMBER	EMAIL
SITE SUPERVISOR	TBC		
ENVIRONMENTAL REPRESENTATIVE	TBC		

Inductions

All workers on site shall be briefed on the control measures outlined in this Environmental Management Plan. This should include and outline of the rapid stabilisation and spill response procedures. A copy of this Environmental Management Plan shall be kept on site at all times.

Environmental incident notification and reporting
Any environmental incidents which may result in an adverse effect on the environment or community shall be notified to the Regulatory Team at Queenstown Lakes District Council within 12 hours of the incident occurring. Any spills or offsite release of a hazardous substance shall be notified immediately to the Pollution Hotline at Otago Regional Council.

QLDC Regulatory Team – 03 441 0499 **ORC Pollution Hotline – 0800 800 033**

Environmental inspections
The Environmental Representative will inspect all control measures at the start of each working day, and ensure that all measures are in good condition and suitable for the works. Inspections will also be undertaken where adverse weather events are forecast. The site should always be suitably stabilised to limit erosion and sedimentation, any potential spills, discharges and deposition of waste from site.

Operational requirements

Site Set-up
The site will have the following measures installed. These need to be considered when planning site set out:

- ☐ Stabilised access point
- ☐ Waste collection facility
- ☐ Concrete wash out bay
- ☐ Parking area
- ☐ Hazardous substance storage facility
- ☐ Wash down facility (mud from tyres)
- ☐ Fencing
- ☐ Spill kit

Further Comments/Other Measures:

See attached plan for proposed measures. Or add here by contractor based on their proposed site management (SMP) or quality plan/proposal (SQP);

Drainage, Erosion and Sediment Control
Under the Queenstown Lakes District Plan, no discharge of water holding sediment is allowed off-site, unless you have a resource consent permitting this activity. Consider your site and your works: what's the best tool for the job, to make sure your site is stabilised at all times.

The site will have the following measures installed. These need to be considered when planning site set out:

- ☐ Water diverted around site
- ☐ Minimise area of exposed soil
- ☐ Sediment fences
- ☐ Bunds and/or catch drains
- ☐ Sediment retention device
- ☐ Stockpile management
- ☐ Stabilisation following earthworks
- ☐ Storm water inlets protected (closed off or sediment sock)

Ongoing management of erosion and sediment controls:

- ☐ E&SCs to be inspected daily, prior to heavy rainfall and following heavy rainfall
- ☐ E&SCs are always correctly installed and suitable for the planned works
- ☐ Sediment deposits removed from E&SCs following storm events to ensure capacity for next storm

Rapid Stabilisation Procedure:
In the event of heavy rainfall or significant weather event forecast, the site can be quickly stabilised by:

- Silt traps constructed to slow the flow, collect silt and sediment and minimize erosion.
- Install all Controls as per ESC Plans
- Stabilize all Surfaces with Grass or Blow Hay as quickly as Possible.
- Apply tackifier on any exposed areas if necessary of very heavy rain forecasted.
- Location of stockpiles away from runoff areas and possible erosion sources.
- Provision of temporary cut off drains to divert flow from areas without vegetation and where stockpiles are created, or where erosion is likely to occur. (over and above ESC)
- Compaction or stabilization of stockpiles to stop erosion and run off.
- Provision of temporary sediment traps in all open drains or cut-off drains e.g. Geotextile Barriers. Litter Booms.
- Restoration of vegetation, grass or trees to Clients Standard as quickly as possible upon completion.

Erosion and Sediment Control Plan:
This needs to demonstrate:
> overland flow paths
> locations of controls (sediments fences, catch drains, sumps, etc)
> stormwater outlet point

Draw ESCP Here

See attached plan.

Dust Management

The site will have the following measures installed. These need to be considered when planning site set out:
☐ Irrigators for soil dampening ☐ Hand watering ☐ Longstanding stockpiles covered/stabilised
☐ Stockpile heights minimised ☐ Geotextiles device ☐ Soil binders
☐ Progressive stabilisation

Ongoing management of dust:
☐ Dust generating activities avoiding during windy weather (where possible)
☐ Stabilise site when works untended for more than 5 calendar days

Further Comments/Other Measures:

The contractor shall be responsible for managing construction works to appropriately avoid and mitigate adverse effects on air quality from dust.

Site-specific parameters will be required to confirm performance of wind-borne dust transportation, including silt fencing and panels covered with fabric or approved techniques.
The Environmental Representative shall ensure that those parameters established to mitigate adverse effects on air quality from dust are effective by way of site-specific monitoring.

Dust Policy & Procedure:

The contractor recognizes its responsibility to minimize and if possible eliminate the chance of Dust or other Air Pollution because of construction processes.
Pollution relating to Dust and Airborne Pollution is caused by but not limited to:

Dust: Plant and Equipment Movements and Wind Erosion
Airborne Pollution: Vehicle Exhausts, Burning off and Fires, Odours or Toxic Gas

The contractor's Supervisors and Operators are trained to be aware of what causes the pollution, and how it can be minimized on the Company construction sites.
Prior to commencing work, an assessment of the pollution risks and control measures shall be carried out and recorded by the Project Manager/Environmental Rep.

Control measures that will be used include:

Dust:
- Use Water Cart or other means to keep tracks and work areas free of dust.
- Contain Plant movements to a minimum and do not destroy any more vegetation than is required.
- K-line Irrigation to Mitigate dust outside of Operating Hours (if undertaken in drier/summer months)
- Utilize Polymer Agent to lengthen the period the ground can be held stable without generation of dust
- Reinstate Exposed Disturbed Ground as quickly as possible with Grass Strike, Tackifier or Blow Hay Mulch

Air Pollution
- Maintain exhaust and engine systems to reduce exhaust emission.
- Do not light fires. Burning off is not acceptable.
- Eliminate odours and toxic gases in live sewer work by ventilation of the work area.

Supervisors and key staff, including operators, shall assess the risks associated with the pollution hazard and

take the necessary action, from control measures above.
Where a different type of pollution occurs, the Project Manager shall be notified and new control measures developed, and passed onto the employees by Environmental Instructions through the toolbox meetings.
All employees are encouraged to notify supervisors of incidents or practices that cause pollution of any kind, to allow them to be adequately controlled.

Noise and Vibration management

Although it has been acknowledged in the resource consent that noise & vibration would be very minimal and not considered to have any adverse effect beyond the site boundary, the below is included as additional procedures, should they be required.

Ongoing management of noise and vibration:

☐ Activities to be undertaken between 0730hrs – 1830hrs Monday to Saturday inclusive
☐ Letter drops to neighbours during any unusually loud or noisy activities
☐ Noise dampening devices utilised and avoidance of loud slamming to be avoided where possible

Further Comments/Other Measures:
The contractor will be responsible for the management of construction noise generated from construction works.

It is acknowledged that noise and vibrations may pose a potential impact on the surrounding environment and neighbouring residential properties. Noise management and practices should comply with NZS 6803:1999.

Proposed measures include:

- Overall operation to be undertaken between 7.30am and 6.30pm, Monday to Saturday, and will exclude Sundays and Public holidays.
- Limitation of radio use to reasonable volumes to minimize disturbance.
- Keep in regular communication with neighbouring property owners. If vibration or noise levels become an issue, then review the construction methodology.

Noise Policy & Procedure:

The contractor recognizes its responsibility to minimize and if possible eliminate the chance of Noise Pollution because of construction processes.

Risk Detail:

Noise pollution is possible from internal combustion engines used in construction plant. It can also be generated during construction activities.

Preventative Measures:

Noise is to be minimized by using well-maintained modern plant with efficient mufflers.

Where out of hours' work is necessary (e.g. due to traffic management constraints), nearby residents will be notified (e.g. letter drop).
The QLDC will also be informed so that they are aware the activity is taking place and the reason it has been scheduled out of hours.

QLDC may, in some situations, be supplied with a 24-hour contact number for the Site Supervisor. Other noise control measures may include:

1. Rescheduling work activities.
2. Use of alternative construction methods, forms of communication or machinery.

Objectives

1. Use of noise barriers (barriers should be 0.5m above the highest noise source).
2. Scheduling of noisy activities at times of least impact.
3. Locating noise-generating activities in non-sensitive areas.
4. Not allowing idling vehicles/trucks to be left running near noise sensitive areas.

5. Selection of equipment based on machinery noise levels.
6. Ensuring trucks/vehicles use designated access roads rather than suburban streets where possible.

Cultural Heritage Management

Accidental Discovery Protocol

There are no known cultural or archaeological items or features on the subject site as stated in the resource consent.

In the event that an archaeological site (defined as a place associated with pre-1900 human activity, regardless of cultural association) is discovered during construction, works onsite will cease immediately and the accidental discovery protocol will be followed.

Further Comments/Other Measures:
The Contractor shall be responsible for the management and protection of Cultural Heritage within and adjacent to the site to avoid adverse environmental effects to Cultural Heritage.
While QLDC records have no site-specific reference to cultural heritage, the Contractor shall always be aware of the responsibilities of the Heritage New Zealand Pouhere Tāonga Act, 2014 (HNZPTA). This can be achieved through following the Accidental Discovery Protocol.

Chemicals and Fuels management

The main environmental concern for fuel and chemical management is avoiding spills entering a watercourse or groundwater.

Ongoing management of chemicals and fuels:

☐ Containers closed and appropriately stored at all times when not in use
☐ Spill kit onsite at all times and restocked immediately following any spills

Spill Response procedure:

Refuelling will be undertaken offsite or at a designated site depot refuelling area.
The contractor must maintain appropriate equipment including spill kit at the depot and the refuelling area shall be appropriately remediated upon completion of works (including removal of contaminated material to QLDC's Victoria Flats contaminated materials dumpsite).
Apart from a mobile diesel storage tanker and flocculants, chemicals are not anticipated and shall not be stored on site.

Chemicals and Fuel Management Policy & Procedure:

Sound practices shall be implemented to minimize environmental impacts and eliminate health risks and nuisance to residents near the work site.

- Ensure a spill kit or alternative material is available on site or where fuel or chemicals are stored in the event that a spill occurs. If you are working near a waterway, material should be available to contain and clean up spillage in water.
- Regularly inspect and maintain hoses and fuel lines on plant and equipment for leaks or damage before they burst or fail.
- Make PVC chemical resistant gloves available for personnel to use while cleaning up a spill.
- Make all personnel aware of the location of the spill kit or clean up materials at the site induction.
- Advise the site supervisor if a spill occurs.
- Contact the Local Authority where a spill results in off-site environmental impact to ascertain their involvement, instructions.
- Contact the Local Authority to advise in the clean-up if a spill is too large or you are unable to clean it up or it has resulted in a significant environmental impact. DOC may also get involved.
- Notify the client.

1. CONTROL the spill

If a spill occurs, identify the source and assess whether it can be controlled (stopped) in a safe manner. Protect storm water drains and waterways by placing earth, sand or absorbent material around storm water entrance points and alongside waterways to prevent pollution.

2. CONTAIN the spill

Stop the spill from spreading. Again, this can be done using absorbent material, booms, sand etc. This will minimize the area requiring clean up.

3. CLEAN UP the spill

Soak up the spill with absorbent material and ensure the surface is left clean. Material used to clean up the spill should be placed in a drum labelled "Spill Kit Waste". When this drum is full, it should be removed from site as prescribed waste. Refer to Work Instruction – Disposal of Prescribed Waste. In some instances, a Sucker truck may be required to vacuum up the liquid.

Notes: Absorbent, particulate, sand and earth should not be used to absorb spills in water. Absorbent booms and pads can be obtained which are especially designed for water spills.
The contents of the spill kit should be replaced as soon as possible to ensure materials are available in the event of another spill occurring.

Waste management

Ongoing management of waste:

☐ Appropriately-sized bin located onsite with lid
☐ Site cleaned free of rubbish at the end of each day
☐ Waste regularly removed from site such that bins are not overflowing
☐ Adopt the Waste Hierarchy

Further Comments/Other Measures:

The Contractor shall make provision for the collection, storage and removal from the site of any material from:

- Stripping and clearance of existing site materials;
- Rubbish from site personnel

Preventative/Control Measures:

Assess, develop and implement purchasing, handling and work practices that:

a) Control quality of materials supplied to site to reduce rework and problems due to quality.
b) Reduce the amount of waste and cost through unnecessary purchase by ordering materials in appropriate quantities and sizes.
c) Investigate product substitution for recycled materials if the quality and cost is comparable.
d) Try to reduce the amount of packaging which arrives on site by requesting that the supplier takes responsibility for packaging waste by providing take back options and/or reducing the amount of unnecessary packaging.
e) Assess re-use options on other sites or store for future use where excess material is present on site. Developing and issuing a regularly updated asset register will identify what materials are available in storage.
f) Identify areas where cleaner production could be implemented i.e. protection of storm water pits once installed to prevent the pits from having to be cleaned out prior to handover.
g) Reduce the amount of re-work by better supervision of own work eg, accuracy of final asphalt levels, compaction of pavement.
h) Minimize the damage to constructed works by others and possibly by our own continuing work.
i) Minimize loss of efforts due to weather.
j) Achieve specific results with minimal effort

GeoSolve Ref: 230197
12 June 2024

Simon Laming
311 Thames Street
Oamaru, 9400

Geotechnical and Soakage Assessment for Resource Consent 538 Wanaka-Mount Aspiring Road, Wanaka

Introduction

This report presents the results of a geotechnical and soakage investigation and assessment completed for a proposed residential building platform at 538 Wanaka-Mount Aspiring Road, Wanaka. The investigations were undertaken to provide a geotechnical ground model, foundation recommendations and parameters and soil permeability parameters to assist preliminary engineering design. Recommendations for earthworks construction and general geotechnical suitability recommendations for the building platform are also provided.

This report is sufficient to support resource consent application to council and to inform preliminary structural design requirements. Further geotechnical review and assessment is recommended at building consent and dwelling design stage.

Photo 1 – Site photo looking west over the proposed building platform location.

The investigations were completed for Simon Laming in accordance with GeoSolve Ltd.'s proposal dated 29th March 2023, which outlines the scope of work and conditions of engagement.

To complete this assessment GeoSolve have undertaken the following works:

- A site inspection;
- A review of the development plans;
- 6 test pits extending to between 2.2 and 2.7 m below ground level (bgl) with associated Scala penetrometer testing;
- 1 soakage test at 1.0 m bgl, and;
- A desktop review of existing information in adjacent areas and QLDC natural hazard mapping.

Proposed Development

The Southern Land resource consent earthrworks plan provided depicts the formation of a single residential building platform with a total area of 1000 m^2.

Based on the earthworks plans provided we understand that maximum cut and fill volumes of 3.0 and 3.1 m respectively, are required to establish the proposed building platform RL of 347.40 m. We understand that cut and fill earthworks will also be required to establish the driveway and proposed landscaping mounds.

We understand that onsite stormwater and wastewater disposal is required as part of the development. GeoSolve understands that the stormwater and wastewater disposal area is proposed northwest of the building platform.

Site Description and Topography

The proposed building platform is located within an existing rural residential site, approximately 5 km northwest of central Wanaka. Lake Wanaka is located approximately 300 m east of the proposed building platform and is topographically approximately 67 m lower.

Figure 1 – Location of the proposed building platform in relation to surrounding site features (Source: Google Earth).

The building platform is situated in an area of undulating hills between Roys Peak to the southwest and Lake Wanaka to the east. The area of undulating hills is separated from the

Roys Peak foothills by a 500 m wide area of flat ground. The building platform slopes at approximately 1(v):4(h) towards north-northeast.

The building platform is generally covered in grass and is surrounded by scattered Kanuka trees and is typically used for sheep grazing. Access to the site is via a private gravel driveway off Wanaka-Mount Aspiring Road. No access to the building platform has been formed.

Minor evidence of existing earthworks was observed around the proposed building platform location including the formation of a narrow farm track and a small excavation used to dump farm debris.

The site is naturally free draining, and no spring flows were evident on the surface of the building platform during the investigation.

Subsurface Conditions

Geological Setting

The site is located in the Wanaka Basin, a valley feature formed predominately by glacial advances. Published references indicate last glacial advance occurred in the region about 18,000 years ago.

The glaciations have left glacial deposits comprising glacial till, and outwash gravel over ice-scoured schist bedrock. Post-glacial times have been dominated by erosion of the bedrock by local watercourses and deposition of alluvial fan deposits. Lacustrine sediments were deposited in Lake Wanaka and beach gravel around the shoreline as post-glacial lake levels fell.

No active fault traces are known to exist in the immediate vicinity of the site; however, a significant seismic risk exists in the region due to the rupture of the Alpine Fault which is located along the west coast of the South Island. There is a high probability that an earthquake with a magnitude of up to Mw8 will occur on the Alpine Fault within the next 50 years. This would subject the Wanaka region to strong ground shaking.

Stratigraphy

The subsurface stratigraphy observed during the building platform investigations typically comprises:

- 0.1-0.3 m of **topsoil**, overlying;
- 0.6-1.1 m of **colluvium,** overlying;
- 1.1-1.9 m of **glacial till**, overlying;
- 0.1 m + of **schist bedrock.**

Topsoil was observed at the surface of all test pits to depths of between 0.1-0.3 m below ground level (bgl). Topsoil typically comprises dark brown, organic silty SAND with roots and rootlets and was moist to wet.

Colluvium was observed underlying topsoil all test pits to depths of between 0.8-1.3 m bgl and comprises moist to wet, stiff, sandy SILT with some to trace gravel, minor to trace cobbles and trace boulders, rootlets and organic inclusions.

Glacial till was observed underlying the colluvium in all test pits to depths of between 2.1-2.6 m bgl. Glacial till typically comprises moist to wet, very stiff to hard, sandy SILT and SILT with minor to trace sand and gravel, cobbles and trace boulders, dense silty SAND with trace

gravel, cobbles and boulders and SAND with some to minor silt, minor to trace gravel and trace cobbles and boulders.

Schist bedrock was observed underlying the glacial till in all test pits from depths of between 2.1-2.6 m bgl. The schist bedrock typically comprises**,** moderately strong, slightly weathered psammitic SCHIST with very thin laminated foliation.

No groundwater was observed in any of the test pits during investigations, the soils were predominantly in a dry to wet condition. Based on nearby borehole data the regional groundwater table is expected to be well below the building platform level.

Full details of the observed subsurface stratigraphy can be found within the test pit logs contained in Appendix B.

Geological Hazards

Slope Stability

No mapped existing slope stability hazards are present within the building platform area and no evidence of slope instability was observed during the site investigation. The building platform is gently to moderately sloping and is set back approximately 300 m from the crest of the slope adjacent to Lake Wanaka.

Global slope instability is not considered a hazard to the proposed building platform. No further assessment is considered necessary.

Seismic

A severe seismic risk is present in the region as discussed in the geological setting and appropriate allowance should be made for seismic loading during detailed design of the proposed building, foundations and retaining walls.

Alluvial Fan

The building platform is not subject to alluvial fan hazard due to its elevated position. No further assessment is considered necessary.

Liquefaction

There is no liquefaction hazard due to the shallow depth to schist bedrock. No further assessment is considered necessary.

Engineering Considerations

The recommendations and opinions contained in this report are based upon ground investigation data obtained at discrete locations and historical information held on the GeoSolve database. The nature and continuity of subsoil conditions away from the investigation locations is inferred and cannot be guaranteed.

Site Preparation

During the earthworks operations all topsoil, organic matter, uncontrolled fill, and other unsuitable materials should be removed from the construction areas in accordance with the recommendations of NZS 4431:2022.

The fine-grained colluvium and glacial till soils are susceptible to moisture and will weaken if subject to rainfall, frost or vehicle trafficking. Exposure to the elements should be limited for fine-grained soils. Covering the shallow foundation soils with 50 mm of site concrete or 200 mm of granular engineered fill should be carried out immediately following excavation to reduce degradation due to vehicle trafficking, frost, rain and surface run-off. Topsoil and unsuitable soil stripping and subsequent earthworks should be undertaken only when a suitable interval of fair weather is expected.

To minimise the effects of freeze-thaw cycles, all shallow foundations in soils should be founded a minimum of 0.4 m below the adjacent finished ground surface.

Engineered fill that is utilised as bearing for foundations should be placed and compacted in accordance with the recommendations of NZS 4431:2022 and certification provided to that effect.

Geotechnical Parameters

Table 1 provides a summary of the recommended geotechnical design parameters for the soil and rock materials expected to be encountered during construction across the building platform.

Table 1 – Recommended geotechnical design parameters

Unit	Thickness (m)	Bulk Density γ (kN/m^3)	Effective Cohesion c' (kPa)	Effective Friction ϕ' (deg)	Elastic Modulus E (kPa)	Poissons Ratio ν
Topsoil	0.3-0.4	16	To be removed below building platform.			
Colluvium (stiff, sandy SILT with some to trace gravel, minor to trace cobbles)	0.6-1.1	18	0	31	5,000-10,000	0.3
Glacial till (very stiff to hard and dense, sandy SILT with minor to trace gravel and cobbles, silty SAND, SAND with some to minor silt, minor to trace gravel, SILT with minor sand and gravel)	1.1-1.9	19	0-2	34	20,000	0.3
Schist Bedrock (moderately strong psammitic SCHIST)	0.1 m +	26	10-100+	30	100,000	0.25
Schist Bedrock Defects (Mass strength primarily controlled by defects)	NA	NA	0 (along defect)	25 (along defect)	NA	0.2

Excavations

Due to the sloping nature of the building platform, some earthworks are expected to be required. If large cuts into the rock are proposed further investigations are recommended to assess rock cut stability.

Recommendations for temporary and permanent batter slope angles in dry ground are described below in Table 2. Slopes that are required to be steeper than those described below should be structurally retained or subject to specific geotechnical design.

All slopes should be periodically monitored during construction for signs of instability and excessive erosion, and, where necessary, corrective measures should be implemented to the satisfaction of a geotechnical engineer or engineering geologist.

Table 2 – Recommended batters for temporary and permanent cuts up to 3 m high in dry ground

Material Type	Recommended Maximum Batter Angle for Temporary Cut Slopes less than 3 m high formed in Dry Ground (horizontal to vertical)	Recommended Maximum Batter for Permanent Cuts Less than 3 m high formed in Dry Ground (horizontal to vertical)
	Dry Ground	Dry Ground
Topsoil and Colluvium	1.5H: 1.0V	3.0H: 1.0V
Glacial Till	1.0H: 1.0V	2.5H: 1.0V
Schist Bedrock	0.5H: 1.0V	1.0H: 1.0V

Permanent batter slopes in wet soils are not expected, however if wet slopes are encountered, they should be inspected on a case-by-case basis by a geotechnical engineer to confirm any specific recommendations provided as needed. Drainage installation and/or retaining may be required to maintain stability of slopes effected by groundwater seepage.

Ground Retention

All retaining walls should be designed by a Chartered Professional Engineer using the geotechnical parameters recommended in Table 1 of this report. Due allowance should be made during the detailed design of all retaining walls for forces such as surcharge due to the sloping ground surface behind retaining walls, potential groundwater runoff, seismic and traffic loads.

Groundwater was not identified in the test pits but has the potential to develop following completion of the earthworks, in particular as a result of heavy or prolonged rainfall. To ensure potential groundwater seeps and flows are properly controlled behind the retaining walls, the following recommendations are provided:

- A minimum 0.3 m width of durable free draining granular material should be placed behind all retaining structures.
- A heavy duty non-woven geotextile cloth, such as Bidim A19, should be installed between the natural ground surface and the free draining granular material to prevent siltation and blockage of the drainage media.
- A heavy-duty (TNZ F/2 Class 500) perforated pipe should be installed within the drainage material at the base of all retaining structures to minimise the risk of

excessive groundwater pressures developing. This drainage pipe should be connected to the permanent piped storm water system.

- Comprehensive waterproofing measures should be provided to the back face of all basement retaining walls to stop groundwater seepage into the finished buildings.

Foundations

Following the removal of topsoil, the underlying soils will comprise colluvium and glacial till. No foundation plans or finished floor levels have been provided to GeoSolve at this time, for completeness we have included the bearing capacity for colluvium and glacial till. The colluvium will provide a reduced bearing capacity and if not excavated will govern the bearing capacity for foundation design. The glacial till soil meets the bearing capacity requirements for "good ground" in accordance with NZS3604:2011.

Foundations on Colluvium

Figure 2 below summarises the recommended working stresses for shallow footings which bear upon colluvium. It should be noted that foundation working stresses presented on Figure 2 are governed by bearing capacity in the case of narrow footings and settlement in the case of wide footings.

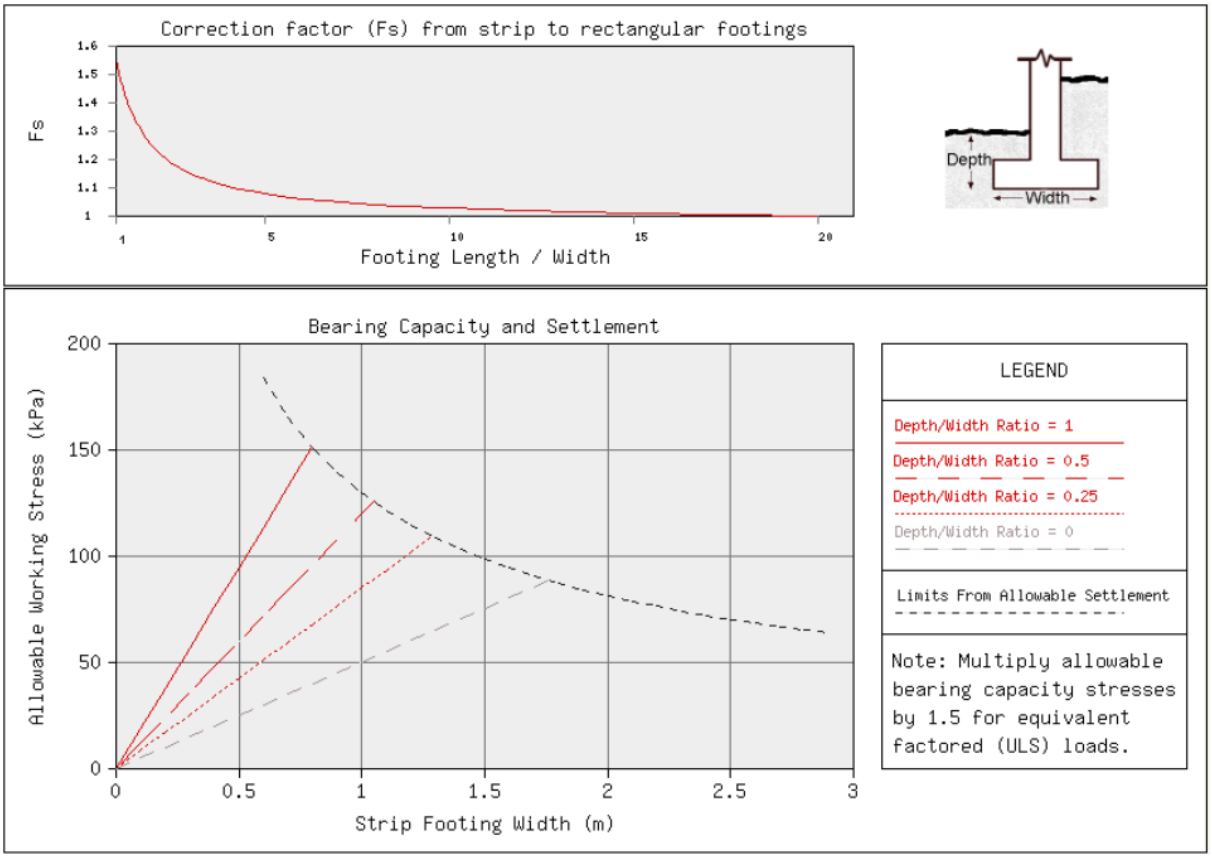


Figure 2 Recommended Bearing for Shallow Footings on Colluvium

From Figure 2 it can be seen an allowable working stress of approximately 70 kPa is recommended for a 0.4 m wide by 0.4 m deep footing that is founded upon colluvium. This

corresponds to a factored (ULS) bearing capacity of approximately 105 kPa and ultimate geotechnical bearing capacity of 210 kPa.

Foundations on Glacial Till

Figure 3 below summarises the recommended working stresses for shallow footings which bear upon glacial till or engineered fill overlying the same, constructed in accordance with NZS4431:2022 and certification provided. It should be noted that foundation working stresses presented on Figure 3 are governed by bearing capacity in the case of narrow footings and settlement in the case of wide footings.

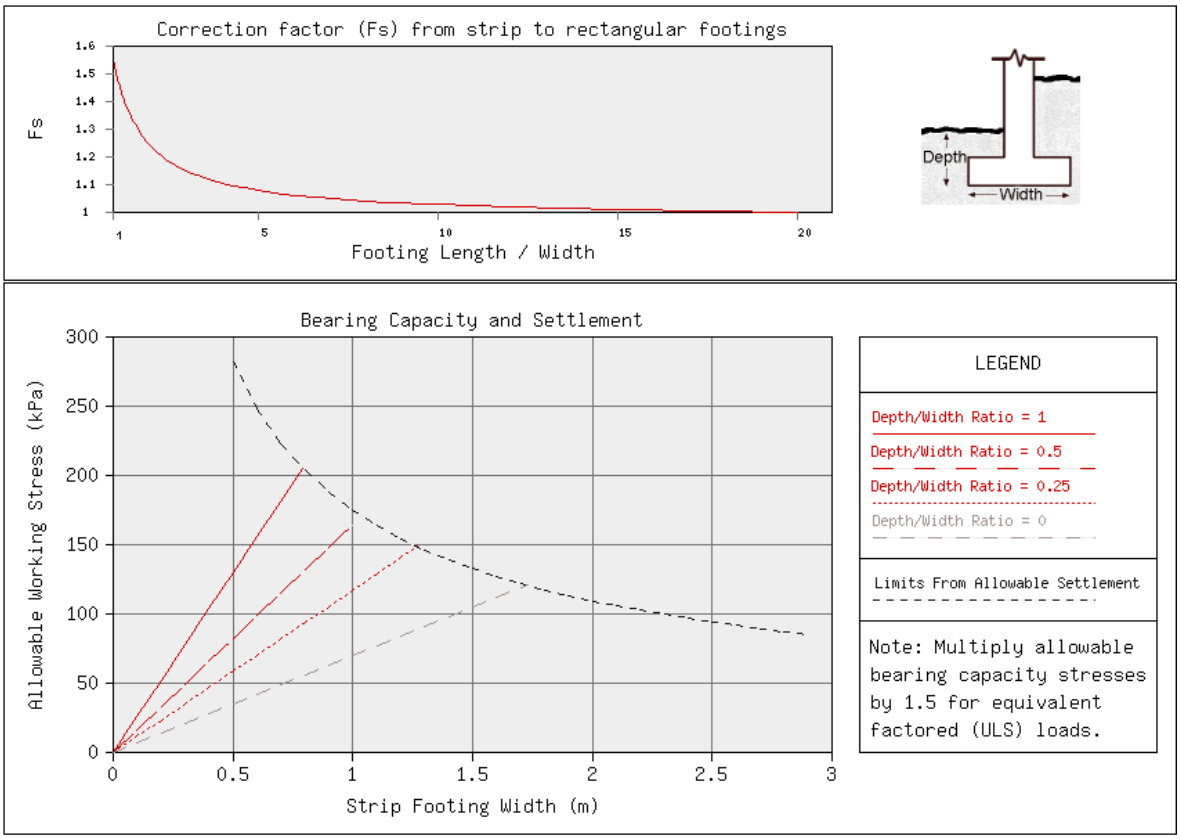


Figure 3 Recommended Bearing for Shallow Footings on Glacial Till or Engineered Fill overlying the same

From Figure 3 it can be seen an allowable working stress of approximately 100 kPa is recommended for a 0.4 m wide by 0.4 m deep footing that is founded upon glacial till or engineering fill overlying the same. This corresponds to a factored (ULS) bearing capacity of approximately 150 kPa and ultimate geotechnical bearing capacity of 300 kPa.

The glacial till soil meets the bearing capacity requirements for “good ground” in accordance with NZS3604:2011.

It should be noted that the bearing capacities presented above assume that the loads are vertical with no horizontal loads or moments applied to the foundations. Reduction factors to account for eccentric and/or horizontal loads can be provided during detailed design once loads are finalised. In addition, no allowances have been made for sloping ground in front of the footings. GeoSolve can provide further advice if required during the detailed design phase.

Settlement

Settlement and differential settlement of shallow foundations are expected to be within structurally acceptable limits providing the recommendations of the foundations section are followed and all unsuitable soil materials are undercut and replaced with engineered fill during construction.

Foundation Subsoil Inspection

It is recommended that the stripped building platform is inspected by a geotechnical engineer or engineering geologist to confirm all unsuitable soils have been removed from the platform and confirm that all geotechnical requirements for the adopted foundation design are met.

Inspection and testing (Scala penetrometers) should be completed along the footing alignments during construction to confirm the above values are applicable and that the soil has not been softened by weather or excavation. A smooth-edged bucket is recommended to undertake the excavation, so the founding soil is not loosened. Compaction with a minimum 400 kg plate compactor should follow all footing and slab excavations to compact soils loosened by the excavation process.

Site Subsoil Category

For detailed design purposes it is recommended the magnitude of seismic acceleration be estimated in accordance with the recommendations provided in NZS 1170.5:2004.

The building platform is considered to be Class B (rock site) in accordance with NZS 1170.5:2004 seismic provisions based on the test pit observations.

Stormwater Soakage

Assessment

On-site soakage testing was undertaken within SP1 as shown in Appendix A, Figure 1. The test procedure comprised filling an open pit with water to a set depth and recording the drop in level over time, i.e. a falling head test. The test was undertaken within the glacial till at 1 m below current ground level. The static groundwater level was not encountered during test pitting and is expected to lie at depth below the site. This will not influence the long-term infiltration rate at this site. Pre-soakage was undertaken prior to undertaking the soakage testing.

Design Recommendations

The test results are presented in Table 3 below and the soakage test results are attached in Appendix C.

Table 3: Calculated infiltration rate from onsite testing

Test	Depth (m)	Soil type at base of pit	Unfactored infiltration rate*
Soak Pit 1	1.0	Glacial Till	**14 mm/hr**
*Does not include a reduction factor of 0.5 to account for loss of soakage performance over time and soakage through the side walls			

To ensure the soak pits onsite are designed to provide suitable stormwater disposal during the design life of the system, we recommend that:

- The stormwater soakage pit is located northwest of the proposed building platform.
- The soakage pit design needs to consider the shallow depth of soil overlying schist bedrock, the base of the soakage pit should have >1 m of soil cover overlying schist rock.
- If the final soak pit location varies from the GeoSolve test location, then it is recommended that an additional test pit is completed prior to excavation of the full soak pit.
- The base of the pit be inspected by a geotechnical practitioner during construction.
- Due to the low soakage rate, if the designed soakage pit is too large for the proposed dwelling a storage system could be considered.
- Provision be included for long-term inspection and routine maintenance of the soakage system.
- An emergency overflow/overland flow path should be identified for extreme storm events where surcharging is possible.
- Due to the low soakage rate the overflow pathway should be considered during detailed design once the location of the soakage pit is confirmed.
- A 0.5 reduction factor should be applied to the value provided within Table 3 to account for loss of soakage performance over time.

Based on the observed soils onsite the following recommendations are provided to aid in wastewater disposal design:

- With respect to wastewater soakage to ground, in accordance with Table 5.1 AS/NZS 1547:2012, the soils are classified as Class 4, Massive. A QLDC Site and Soils Assessment has been completed and is attached in Appendix D. It is recommended that the onsite wastewater disposal system is designed by a suitably qualified professional.

Applicability

This report has been prepared for the benefit of Simon Laming with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

This report is suitable for resource consent application. Further geotechnical review and assessment is recommended at building consent and dwelling design stage.

Report prepared by:	Reviewed for GeoSolve Ltd by:
	
.....	.....
Emma Hutchinson	Fraser Wilson
Engineering Geologist	Senior Engineering Geologist

Attached:

Appendix A – Site Investigation Plan
Appendix B – Test Pit Logs
Appendix C – Soakage Results
Appendix D – QLDC Site Soils Assessment

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NOTES:
- Boundary data sourced from DP 24014 & DP 549904.
- Abuttal data sourced from LINZ XML
- Aerial Imagery is indicative only and has not been orthorectified

LAKE ROAD

LUC Class 4
LUC Class 6

LOT 1
18.83 Ha

Section A - Sight Line

577.13
42.09
20.00
0.00
38.35
11.05
40.00
27.33
17.34
13.15
28.20
26.00
38.60
121.5
27.21
60.00
130.46
80.00
100.00
120.00
140.00
160.00
180.00
170°17'20"
56.53
100°51'
42.29
22.22
45.00
7.90
11.80
20.00
11.80
20.00

DRIVEWAY 1

MOUND B
TP6
SP1
TP1
Max Fill
3.1m
TP5
BUILDING PLATFORM
RL 347.40
1,000m²
TP2
Max Cut
3.0m
TP4
Water Tanks

MOUND A
TP3

Section A - Sight Line

LOT 2
4.67 Ha

CUT

<-3.0	to	-3.0	m
-3.0	to	-2.5	m
-2.5	to	-2.0	m
-2.0	to	-1.5	m
-1.5	to	-1.0	m
-1.0	to	-0.5	m
-0.5	to	-0.2	m
-0.2	to	-0.0	m
0.0	to	0.2	m
0.2	to	0.5	m
0.5	to	1.0	m
1.0	to	1.5	m
1.5	to	2.0	m
2.0	to	2.5	m
2.5	to	3.0	m
3.0	to	>3.0	m

FILL

EARTHWORKS VOLUMES

Total Cut	2150 m³
Total Fill	2150 m³
Balance	0 m³
Stripping Area	4400 m²

LEGEND
- Major Contour 2m
- Minor Contour 1m

Key
- TP1 = Test Pit and Scala Penetrometer
- TP1 = Soakage Pit
- = Proposed Building Platform

Scale 1:1700
0 20 40 60 80 100 (m)

CADFILE:	Sketch 1.xar	DRAWN	ELH	06/2024
SCALE (AT A3 SIZE):	AS SHOWN	DRAFTING CHECKED	ELH	06/2024
PROJECT No:	230197	APPROVED	FAW	06/2024

GEOSOLVE
ENGINEERING CONSULTANTS
GEOTECHNICAL
WATER RESOURCES
PAVEMENTS

Simon Laming
Geotechnical and Soakage Assessment
538 Wanaka-Mount Aspiring Road, Wanaka
Site Investigation Plan

FIG No: APPENDIX A, FIGURE 1
REV. 1

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TEST PIT LOG

Application is Notified 1969

EXCAVATION NUMBER: **TP 1**

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical		

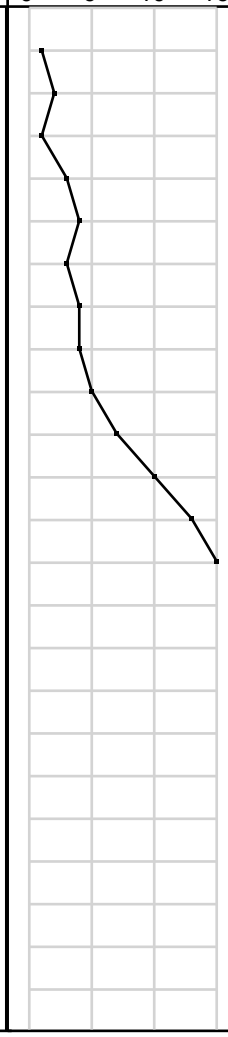
EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

Soil / Rock Type	Description	Depth (m)
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet.	0m – 0.3m
COLLUVIUM	Sandy SILT with trace of gravel, cobbles, boulders and rootlets; orange, dips with topography. Stiff; moist to wet; chaotic; sand, fine; gravel, medium to coarse, subangular to angular (schist); boulders up to 300 mm diameter.	0.3m – 0.9m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; grey with minor orange stain, dips with topography. Very stiff; moist; massive; sand, fine to medium; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 500 mm diamerer.	0.9m – 1.7m
GLACIAL TILL	Silty fine to medium SAND with trace of gravel, cobbles and boulders; grey with minor orange stain, dips with topography. Dense; moist; massive; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 500 mm diamerer.	1.7m – 1.8m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; brownish grey, dips with topography. Very stiff; moist; massive; sand, fine to medium; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 300 mm diamerer.	1.8m – 2.1m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; dark grey, dips with topography. Very stiff; moist to wet; massive; sand, fine to medium; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 300 mm diamerer.	2.1m – 2.3m
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered.	2.3m – 2.4m

Graphic Log

Groundwater / Seepage: NO SEEPAGE

Scala Penetrometer (Blows per 100mm)



Total Excavation Depth = 2.4 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

GEOSOLVE
ENGINEERING CONSULTANTS

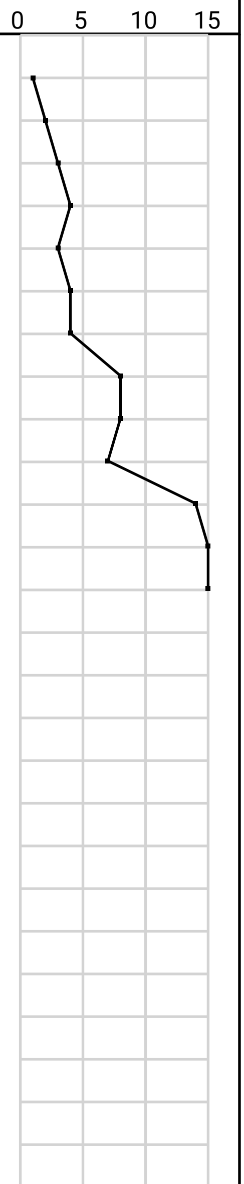
TEST PIT LOG

EXCAVATION NUMBER:
TP 2

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical		

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

Soil / Rock Type	Description	Depth	Graphic Log	Depth (m)	Groundwater / Seepage	Scala Penetrometer (Blows per 100mm)
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet.	0m – 0.2m		0.0–0.2		
COLLUVIUM	Sandy SILT with trace of gravel, cobbles, boulders, rootlets and organic inclusions; orange brown, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, fine to coarse, subrounded to angular (schist); boulders up to 400 mm diameter.	0.8m		0.2–0.8		
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; grey, contact dipping 5 deg to N. Very stiff; moist; massive; sand, fine; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 400 mm diamerer.	1.7m		0.8–1.7		
GLACIAL TILL	Fine to medium SAND with minor silt and trace of gravels; grey, dips with topography. Dense; moist; massive; gravel, fine to medium, sub angular to sub rounded (schist).	1.9m		1.7–1.9		
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; dark grey, dips with topography. Very stiff; moist to wet; massive; sand, fine; gravel, fine to coarse, angular to sub rounded (schist).	2.6m		1.9–2.6		
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered.	2.7m		2.6–2.7	NO SEEPAGE	



Total Excavation Depth = 2.7 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

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TEST PIT LOG

Application Is Notified 16

EXCAVATION NUMBER:
TP 3

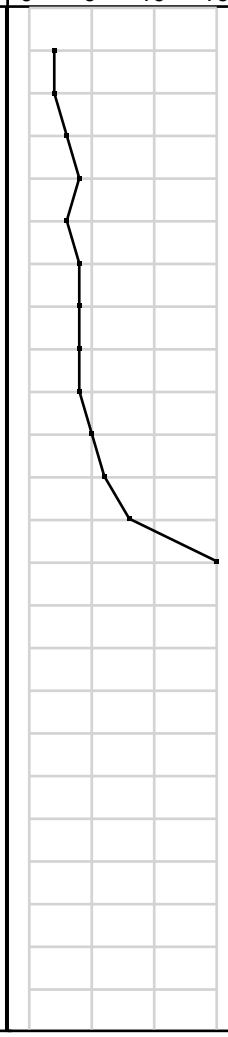
PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical		

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

Soil / Rock Type	Description	Graphic Log	Depth (m)
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet. 0m – 0.2m		0.0 – 0.2
COLLUVIUM	Sandy SILT with minor gravel and trace of cobbles, boulders and rootlets; orange, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, fine to medium, subrounded to angular (schist); boulders up to 150 mm diameter. 1.1m		0.2 – 1.1
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; grey, dips with topography. Very stiff; moist; massive; sand, fine to medium; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 250 mm diamerer. 1.6m		1.1 – 1.6
GLACIAL TILL	Fine to medium SAND with some silt, minor gravel and trace of cobbles and boulders; grey, dips with topography. Dense; moist; massive; gravel, fine to medium, sub angular to sub rounded (schist). 2.1m		1.6 – 2.1
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; dark grey, dips with topography. Very stiff; moist to wet; massive; sand, fine to medium; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 300 mm diamerer. 2.3m		2.1 – 2.3
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered. 2.4m		2.3 – 2.4

Groundwater / Seepage: NO SEEPAGE

Scala Penetrometer (Blows per 100mm)



Total Excavation Depth = 2.4 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

GEOSOLVE
ENGINEERING CONSULTANTS

TEST PIT LOG

Application Is Notified 1968

EXCAVATION NUMBER:
TP 4

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical		

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

Soil / Rock Type	Description	Graphic Log	Depth (m)	Groundwater / Seepage	Scala Penetrometer (Blows per 100mm)
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet. (0m – 0.1m)		0.0 – 0.1		
COLLUVIUM	Sandy SILT with minor gravel and trace of cobbles, boulders and rootlets; orange, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, medium to coarse, subrounded to angular (schist); boulders up to 300 mm diameter. (0.1m – 0.9m)		0.1 – 0.9		
GLACIAL TILL	Sandy SILT with minor gravel and cobbles and trace of boulders; brownish grey, dips with topography. Very stiff to hard; moist; massive; sand, fine; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 400 mm diamerer. (0.9m – 2.1m)		0.9 – 2.1	NO SEEPAGE	
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered. (2.1m – 2.2m)		2.1 – 2.2		

0 5 10 15

Total Excavation Depth = 2.2 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

GEOSOLVE
ENGINEERING CONSULTANTS

TEST PIT LOG

Application is Notified (1)

EXCAVATION NUMBER: **TP 5**

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:	See Site Plan	INCLINATION:	Vertical		

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

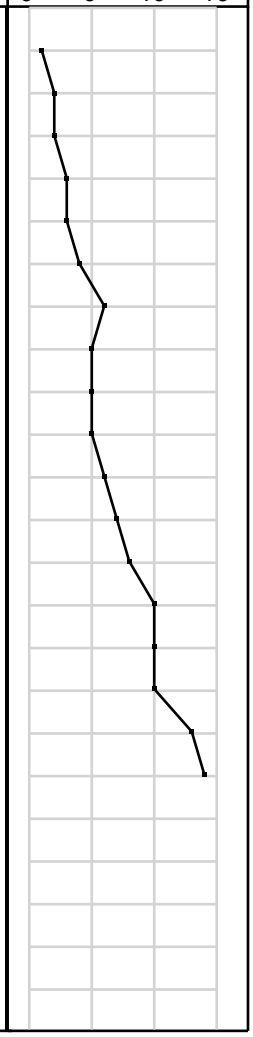
Soil / Rock Type	Description	Depth
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet.	0m – 0.3m
COLLUVIUM	Sandy SILT with trace of gravel, cobbles, boulders and rootlets; orange, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, medium to coarse, subangular to angular (schist); boulders up to 300 mm diameter.	0.3m – 1.2m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; grey, dips with topography. Very stiff; moist; massive; sand, fine; gravel, fine to medium, sub angular to sub rounded (schist); boulders up to 500 mm diamerer.	1.2m – 1.6m
GLACIAL TILL	Fine SAND with minor silt and trace of gravel, cobbles and boulders; grey, dips with topography. Dense; moist; massive; gravel, fine to coarse, sub angular to sub rounded (schist); boulders up to 400 mm diamerer.	1.6m – 2.1m
GLACIAL TILL	SILT with minor sand and gravel and a trace of cobbles and boulders; dark grey, dips with topography. Very stiff; moist to wet; massive; sand, fine; gravel, fine to coarse, angular to sub rounded (schist); boulders up to 300 mm diamerer.	2.1m – 2.3m
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered.	2.3m – 2.4m

Graphic Log

Depth (m): 0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4

Groundwater / Seepage: NO SEEPAGE

Scala Penetrometer (Blows per 100mm)



Total Excavation Depth = 2.4 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1

GEOSOLVE
ENGINEERING CONSULTANTS

TEST PIT LOG

Application is Notified (1)

EXCAVATION NUMBER: **TP 6**

PROJECT:	538Wanaka-MountAspiringRoad			JOB NUMBER:	230197
LOCATION:		INCLINATION:			

EASTING:		EQUIPMENT:	5.5 tonne excavator	OPERATOR:	Athol
NORTHING:		COORD. SYSTEM:		COMPANY:	Diverse Works
ELEVATION:		EXCAV. DATUM:		HOLE STARTED:	03/05/2023
METHOD:	Aerial Photography	ACCURACY:	5 m +-	HOLE FINISHED:	03/05/2023

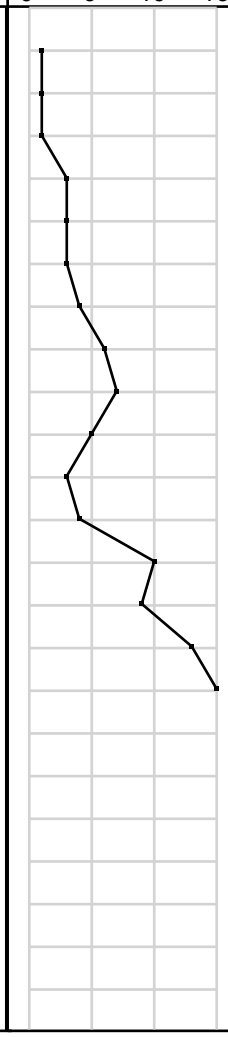
Soil / Rock Type	Description	Depth
TOPSOIL	Organic silty SAND with minor roots and rootlets; dark brown. Moist to wet.	0m – 0.25m
COLLUVIUM	Sandy SILT with a trace of gravel and organic inclusions; orange, dips with topography. Stiff; moist to wet; chaotic; sand, fine; gravel, fine.	0.25m – 0.7m
COLLUVIUM	Sandy SILT with some gravel and minor cobbles; orange, dips with topography. Stiff; moist; chaotic; sand, fine to medium; gravel, fine to coarse, sub rounded to angular (schist).	0.7m – 0.85m
COLLUVIUM	Sandy SILT with a trace of gravel; orange, dips with topography. Stiff; moist; chaotic; sand, fine; gravel, fine to medium, sub rounded to angular (schist).	0.85m – 1.3m
GLACIAL TILL	Sandy SILT with trace of gravel, cobbles and boulders; brownish grey, dips with topography. Very stiff; moist; massive; sand, fine; gravel, fine to medium, sub rounded to angular (schist), boulders up to 500 mm diamerer.	1.3m – 1.9m
GLACIAL TILL	Silty fine to medium SAND with a trace of gravel, cobbles and boulders; brownish grey, dips with topography. Dense; moist; massive; gravel, fine to medium, sub rounded to angular (schist), boulders up to 300 mm diamerer.	1.9m – 2.3m
SCHIST	Psammitic SCHIST; dark grey. Moderately strong; foliated, 5-15 mm; slightly weathered.	2.3m – 2.4m

Graphic Log

Depth (m): 0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4

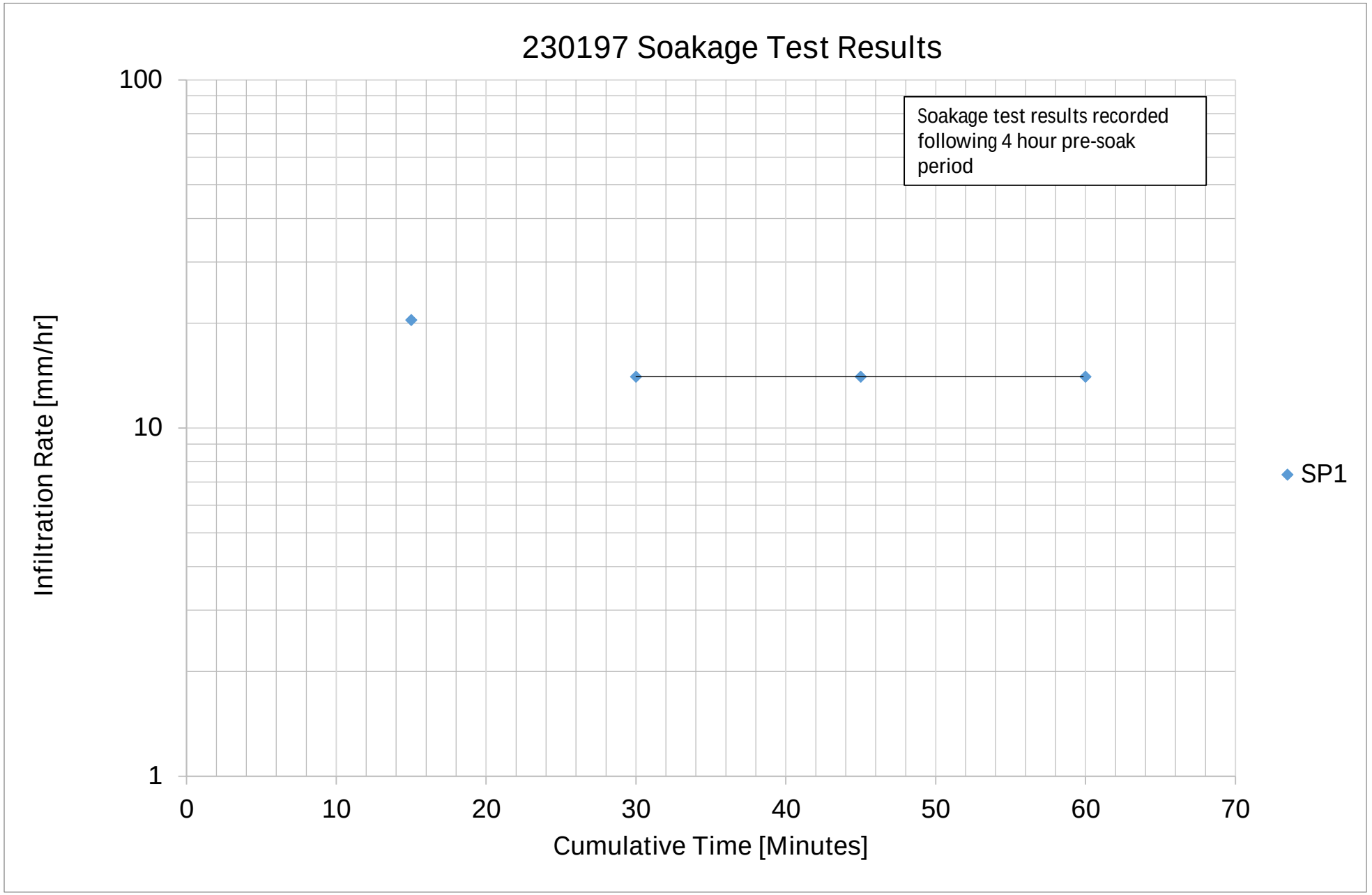
Groundwater / Seepage: NO SEEPAGE

Scala Penetrometer (Blows per 100mm)



Total Excavation Depth = 2.4 m

COMMENT:		LOGGED BY:	JMJ
		CHECKED DATE:	26/05/2023
		SHEET:	1 of 1


230197 Soakage Test Results
Soakage test results recorded following 4 hour pre-soak period
Infiltration Rate [mm/hr]
100
10
1
0
10
20
30
40
50
60
70
Cumulative Time [Minutes]
SP1

Onsite Wastewater Disposal Site & Soils Assessment

QUEENSTOWN LAKES DISTRICT COUNCIL

Use for Subdivision or Land Use Resource Consent

The design standard for waste water treatment and effluent disposal systems is AS/NZS 1547:2012. All references in this form relate to this standard.

Applications should provide sufficient information to demonstrate that all lots will be capable of accommodating an on-site system.

Site Description

Property Owner: Simon Laming

Location Address: 538 Wanaka - Mount Aspiring Road, Wanaka

Legal Description (eg Lot3 DP1234) : Section 6 Block XIII Lower Wanaka SD

List any existing consents related to waste disposal on the site: _____

General description of development / source of waste water:: Formation of a single building platform for a residential dwelling

The number and size of the lots being created: _____

Site Assessment (refer to Tables R1 & R2 for setback distances to site features)

Land use _____

Topography Sloping

Slope angle 15°

Aspect north - northeast

Vegetation cover grass

Areas of potential ponding NA

Ephemeral streams NA

Drainage patterns and overland paths _____

Flood potential (show with return period on site plan) Not flood prone

Distance to nearest water body 300m (east) Lake Wanaka

Water bores with 50m (reference ORC Maps) NO

Other Site Features Existing dwelling to the east of proposed building platform

Slope stability assessment details – summarise any areas unsuitable for waste water irrigation. (Attach report if applicable): No slope stability issues identified

(Highest potential) Depth to ground water:

Summer -5.8

Winter -5.8

Information Source F40/0173

What is the potential for waste water to short circuit through permeable soils to surface and / or ground water? No potential

Soil Investigation (Appendix C)

Field investigation date: 3/5/2023

Number of test pit bores (C3.5.4): 6 testpits + 1 soakpit

Soil investigation addendum to be attached that includes a plan showing test pit or bore location, log results and photos of the site profile.

If fill material was encountered during the soil investigation state how this will impact on the waste water system:

No fill encountered during investigations.

Average depth of topsoil: 0.1 - 0.3 m

Indicative permeability (Appendix G) : 14 mm/h

Percolation test method (refer to B6 for applicability) : Open soak test pit (attach report if applicable)

Soil Category *(Table 5.1)*	Soil Texture *(Appendix E)*	Drainage	Tick One
1	Gravel and sands	Rapid	
2	Sandy loams	Free	
3	Loams	Good	
4	Clay loams	Moderate	✓
5	Light clays	Moderate to slow	
6	Medium to heavy clays	Slow	

Reasons for placing in stated category:

Soil, grain size and permeability during testing. + Depth to bedrock

Loading rate, DLR (Table L1):

Explanation for proposed loading rate:

Recommendations from site and soils assessment

Specify any design constraints
Specify any areas unsuitable for location of the disposal field
Specify any unsuitable treatment and/or disposal systems
Propose suitable mitigation to enable successful effluent treatment

Recommend that the disposal system is located proximal to the testing location.

Depth to schist bedrock to be considered during detailed design of wastewater disposal system

Attachments Checklist

- [x] Copy of existing consents
- [x] Soil investigation addendum
- [x] To scale site plan, the following must be included on the plan:
  - Buildings
  - Boundaries
  - Retaining Walls
  - Embankments
  - Water bodies
  - Flood potential
  - Other septic tanks / treatment systems
  - Water bores
  - Existing and proposed trees and shrubs
  - Direction of ground water flow
  - North arrow

Note that an Otago Regional Council (ORC) consent may also be required to discharge domestic waste water to land if any of the following apply:

- Daily discharge volume exceeds 2,000 litres per day
- Discharge will occur in a groundwater protection zone
- Discharge will occur within 50 metres of a surface water body (natural or manmade)
- Discharge will occur within 50 metres of an existing bore/well
- Discharge will result in a direct discharge into a drain/water ace/ground water
- Discharge may runoff onto another persons' property

If any of these apply then we recommend that you correspond with the ORC;

Otago Regional Council
"The Station" (upstairs)
Cnr. Camp and Shotover Streets
P O Box 958
Queenstown 9300

Tel: 03 442 5681

I believe to the best of my knowledge that the information provided in this assessment is true and complete. I have the necessary experience and qualifications as defined in Section 3.3 AS/NZS 1547:2012 to undertake this assessment in accordance with the requirements of AS/NZS 1547:2012:

Company: GeoSolve Limited

Email: emma@geosolve.co.nz

Phone number: +64 211044989

Name: Emma Hutchinson

Signature: 

Date: 18/5/2023