APPLICATION AS NOTIFIED

K Stalker
(RM221142)

Submissions Close 19 October 2023

FORM 12

File Number RM221142

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:

K Stalker

What is proposed:

Consent is sought to undertake a two lot subdivision, as well as carry out associated earthworks and landscaping, and for land use consent to breach residential density and setback from internal boundaries standards.

Consent is also sought under s127 of the RMA to change Condition 2 of resource consent RM950475 as varied by RM060521 and RM120150 which was granted on 7 October 1997 approving a two lot subdivision and land use consent to construct a dwelling. The changes proposed are in respect of landscaping whereby the landscaping plan approved under RM950475 includes tree planting in the location of proposed Lot 2, and needs to be removed to make way for the new lot.

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

208A Lower Shotover Road, Queenstown

The application includes an assessment of environmental effects. This file can also be viewed at our public computers at these Council offices:

- **74 Shotover Street, Queenstown; and**
- **Gorge Road, Queenstown; and**
- **47 Ardmore Street, Wanaka during normal office hours (8.30am to 5.00pm).**

Alternatively, you can view them on our website when the submission period commences:

https://www.qldc.govt.nz/services/resource-consents/notified-resource-consents#public-rc or via our edocs website using RM221142 as the reference https://edocs.qldc.govt.nz/Account/Login

The Council planner processing this application on behalf of the Council is Rebecca Holden, who may be contacted by phone at 021 170 1496 or email at rebecca.holden@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:

19th October 2023

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 as soon as reasonably practicable after serving your submission to Council:

Kaye Stalker
C/- Kristy Jennings
kristy@brownandcompany.co.nz
Brown & Company Planning Group
PO Box 1467, Queenstown

QUEENSTOWN LAKES DISTRICT COUNCIL

___ _____

(signed by Andrew Woodford pursuant to a delegation given under Section 34A of the Resource Management Act 1991)

Date of Notification: 21st September 2023

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 14-Sep-2023

Class	Description	Doc Set Id / Note Id	Version	Date
PUB_ACC	I. Form 9	7487495	1	12-Jan-2023
PUB_ACC	Assessment of Environmental Effects - 22Aug23	7734759	1	24-Aug-2023
PUB_ACC	15792_01b_Scheme Plan	7753922	1	11-Sep-2023
PUB_ACC	B. Record of Title	7478222	1	04-Jan-2023
PUB_ACC	B. CONO 876500	7478220	1	04-Jan-2023
PUB_ACC	C. Landscape Assessment	7487494	1	12-Jan-2023
PUB_ACC	Amended landscape plan dated 19 Dec 2022	7757127	1	13-Sep-2023
PUB_ACC	4325 - Stalker - Lower Shotover Road - Landscape Memo - 13 Apr 2023	7587838	1	17-Apr-2023
PUB_ACC	4325 - Stalker - Lower Shotover Road - Design Controls - Appendix A - April 2023	7587836	1	17-Apr-2023
PUB_ACC	4325 - Stalker - Lower Shotover Road - Landscape Addendum - 22 Aug 2023	7734757	1	24-Aug-2023
PUB_ACC	4325 - Stalker - Lower Shotover Road - Landscape Assessment Attachments - 22 Aug 2023	7734758	1	24-Aug-2023
PUB_ACC	D. Services Report	7476985	1	23-Dec-2022
PUB_ACC	E. Earthworks Plans	7476984	1	23-Dec-2022
PUB_ACC	G. Geotech Report	7476982	1	23-Dec-2022

PUB_ACC	H. Water Supply Confirmation Letter	7476981	1	23-Dec-2022
PUB_ACC	208A Lower Shotover Road - EMP Package (Rev B)	7577156	1	04-Apr-2023

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: Kaye Stalker
(Name Decision is to be issued in)

All trustee names (if applicable):

*Contact name for company or trust: Kaye Stalker

*Postal Address: 208A Lower Shotover Road, Queenstown

*Post code: 9371

*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: mck@xtra.co.nz

*Phone Numbers: Day 0272355008

Mobile:

*The Applicant is:

- [x] Owner
- [ ] Prospective Purchaser (of the site to which the application relates)
- [ ] 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: Kristy Jennings - Brown & Company Planning Group

*Phone Numbers: Day 03 409 2258

Mobile: 021 443 139

*Email Address: kristy@brownandcompany.co.nz

*Postal Address: PO Box 1467, 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: Kaye Stalker

*Postal Address: 208A Lower Shotover Road

*Post code: 9371

*Please provide an email AND full postal address.

*Email: mck@xtra.co.nz

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

Owner Name:

Owner Address:

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:

*Email:

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:

208A Lower Shotover Road, Queenstown

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

Lot 1 DP 304273

District Plan Zone(s): Wakatipu Basin Rural Amenity Zone (PDP)

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 ☐

Please make contact with agent prior to site visit if required.

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

☑ Change/cancellation of consent or consent notice conditions

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

☐ Land use consent includes Earthworks

☑ Subdivision consent

☐ Certificate of compliance

☐ Existing use certificate

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:

Undertake a two lot subdivision.

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:

☑ Computer Freehold Register 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 if this application 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.

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.

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

I confirm payment by:

- [x] 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 RMSTALKER

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

$3520 - Other subdivision (e.g. Rural Residential, Rural Lifestyle)

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

*Date of Payment 12/23/22

Invoices are available on request

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) **

Full name of person lodging this form: Maddy Familton

Firm/Company: Brown & Company Planning Group

Dated: 23/12/2022

**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)):

ASSESSMENT OF ENVIRONMENTAL EFFECTS

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.

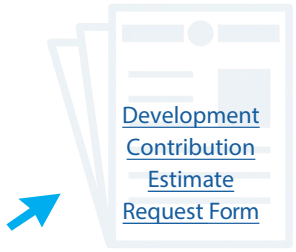
A3 APPENDIX 3 // Development Contributions

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)
- Computer Register (CFR)
- 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

APPLICATION FOR RESOURCE CONSENT

To undertake a two-lot subdivision

22 August 2023

BROWN&COMPANY
PLANNING GROUP

APPLICATION FOR RESOURCE CONSENT UNDER SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991

APPLICANT AND PROPERTY DETAILS

Applicant's name:	K V Stalker
Address for Service:	208A Lower Shotover Road, Queenstown
Address for invoicing:	As above (or different if necessary)
Site Address:	208A Lower Shotover Road, Queenstown
Legal Description:	Lot 1 DP 304273
Plan Zone:	Rural General (ODP) Wakatipu Basin Rural Amenity Zone (WBRAZ) (PDP)
Plan Designations, Limitations or Overlays:	Landscape Character Unit 11: Slope Hill Foothills
Activity Status:	Non-Complying

Prepared for:	*K V Stalker*
Date:	*22 August 2023*
Prepared by:	*Kristy Jennings*
Reviewed by:	*Jeff Brown*

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 complete and accurate.

If signing 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 the Fees Information section.

If signing 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 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 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.

.....
for Brown & Company Planning Group
on behalf of

K V Stalker

22 August 2023

ATTACHMENTS

A	An assessment of effects on the environment in accordance with the Fourth Schedule to the Act.
B	Record of Title (including relevant interests)
C	Landscape Assessment and Attachments
D	Services Report
E	Earthworks Plans
F	Scheme Plan
G	Geotech Report
H	Water Supply Confirmation Letter
I	Form 9

CONTENTS

FOURTH SCHEDULE
ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

1. A DESCRIPTION OF THE PROPOSAL

1.1. Scope of this Document

This Assessment of Effects on the Environment (**AEE**) is submitted in fulfilment of the applicant's duties under the Resource Management Act 1991 (**RMA**). The AEE addresses matters relating to this land use consent application to the Queenstown Lakes District Council (**QLDC** or **the Council**) for the proposal.

This AEE has been prepared in accordance with the requirements of section 88 and the Fourth Schedule of the RMA and provides all information necessary for a full understanding of the proposal and the effects it will have on the environment. To this end, the AEE contains the following information:

- A description of the site and surrounding locality;
- Consent history;
- A description of the proposal;
- Relevant provisions of the QLDC's Operative (**ODP**) and Proposed District Plan (**PDP**);
- An assessment of effects on the environment;
- Section 104D Assessment;
- Part 2 RMA considerations;
- Section 95A Assessment.

1.2. The site and locality

The 'subject site' is located at 208A Lower Shotover Road, Wakatipu Basin.

The site is legally described as Lot 1 Deposited Plan 304273 and is 3.3307 hectares in area.

The site is shown in **Figure 1** below.

Figure 1: Location of the subject site (outlined in cyan)

The subject site is a rear site, accessed by a 400m approx. long access leg that includes a gravel driveway. There are existing trees along the southern side of the driveway and an existing hedge along the northern side.

The driveway then curves to the south and then to the east to the existing residential unit that is located within the eastern part of the site. There are existing trees along both sides of the driveway.

The existing residential unit on the property is single storey with a traditional pitched roof. The residential unit is formed by a number of linked buildings.

A wetland area is located at the south-eastern corner of the site that spans the boundary between the neighbouring site to the south/south-east. The wetland is located within a gully that drops away to the south.

The remainder of the site is lawn with a number of small accessory buildings and vegetable gardens in the northern part of the site. There is also a small pond with associated plantings located adjacent to the northern boundary.

The receiving environment to the north, west and southwest is comprised of rural living properties of various sizes. The lot sizes on the eastern side of Lower Shotover Road, range in size from 1.1555 hectares (208 Lower Shotover Road) to 6.1298 hectares (200 Lower Shotover Road) with the predominant lot size being around 4 hectares. All of these surrounding properties contain existing residential units and associated access and plantings.

The adjoining land to the east is Lot 6 Deposited Plan 463532 and is 78.7 hectares in size. It contains a significant part of the Morven Ferry Hill and steeply slopes up above the subject site to the east and is predominantly pastoral in character with some small areas of existing trees. There is an irrigation

race within this property approximately 12 metres from the eastern boundary of the subject site. The race is open channel.

1.3. Development and Consent History

The following resource consents have been granted for the Subject Site:

- RM950475 - The Subject Site was created via this subdivision consent that was granted approval on 7 October 1997. Land use consent was also granted for the construction of a dwelling on the lot. The subdivision consent was given effect to. There was a planting plan approved as part of this consent which showed orchard planting as well as other shrub and tree planting.

- RM060005 - This consent granted approval on 11 April 2006 to undertake earthworks in associated with the construction of a driveway, building platform and water tank. This consent was given effect to.

- RM060521 - This application approved a variation of the conditions of resource consent RM950475 to allow for a revised design of the approved dwelling and the landscaping plans.

- RM090767 - This consent granted approval for a right of way over the subject site (driveway portion) in favour of 208 Lower Shotover Road.

- RM120150 - Consent was granted on 1 June 2012 to vary resource consents RM950475 and RM060521 to revise the design of the dwelling, to convert a studio into a second residential unit and alter associated landscaping. This landscaping plan shows some tree planting in the location of the proposed lot.

- RM141030 - This consent was granted on 30 March 2015 to change Condition 2 of resource consent RM950475 to alter the design of the approved dwelling.

There is a consent notice registered on the Record of Title for the Subject Site. This is attached as **Appendix B.** The consent notice was registered on the title as a result of a condition of subdivision consent RM920092 granted 22 April 1992.

The conditions of the consent notice state:

> (a) *That no further dwelling may be erected upon that balance farm property as an accessory to the existing farming use now being carried out on that balance farm property;*
>
> (b) *That (this restriction) shall have effect during the five year period commencing on the date of this Resource Consent. At the completion of the five year period the Council will review the matter and determine if (this restriction) should continue. The review can be undertaken in terms of Section 128(a) of the Resource Management Act 1991.*

There is a note within the consent notice that states that for the purpose of Condition (a), the 'balance farm property' comprises that area containing 124.9196 hectares and references the specific lots.

At the time of the subdivision consented via RM9200092, the Subject Site was part of the 'balance farm property' and therefore the consent notice applied to the property. The Subject Site was created via a further subdivision of the 'balance farm property' under RM950475 as outlined above and consequently the consent notice has come down on to the title for the Subject Site also.

1.4. The proposal

The Applicant proposes to create 2 new lots as shown on the Scheme Plans in **Appendix F**.

The applicant proposes to subdivide 208A Lower Shotover Road, Wakatipu Basin into two lots.

Lot 1

Lot 1 is to be 2.2807 hectares in size and is to contain the existing residential unit and the existing driveway.

Lot 2

Lot 2 is to be 1.10 hectares in size and is to contain a proposed 839m² building platform of irregular shape.

The following design controls are proposed for building within the proposed Lot 2:

- Maximum building height of 5.5m
- Maximum building site coverage of 50% of the RBP.
- Light reflectance value (LRV) of roofs to be less than 20%
- LRV of exterior cladding to be less than 30%
- Gabled roofs

Wetland

The proposed building platform is to be located approximately 36 metres away from the wetland to the east. The wetland is located over a ridge in a gully within a separate catchment to the building platform.

Access

The lot is to be accessed from Lower Shotover Road via a right of way over the existing driveway on the property. A short gravel driveway to the proposed building platform is also proposed.

Earthworks

Earthworks are proposed within the proposed Lot 2 to form landscape mounds, a flat platform as well as to construct the entry to Lot 2 off the existing driveway. The approximate volume of earthworks is 3,500m³ across an area of approximately 3000m2. The maximum height of fill will be 3.7m with a maximum 2.6m depth of cut. Details of these works can be seen in the Earthworks Plans (**Attachment E**).

Landscaping

The boundary of proposed Lot 2 is to be fenced with post and 7 wire.

Structural planting is proposed to the north-eastern and western sides of the proposed building platform. The planting consists of Western Red Cedars and Dutch “Lobel” Elms.

Water tanks will be either located within the building platform on Lot 2, be buried or adequately screened with evergreen plantings.

Servicing

The Servicing Report (**Attachment D**) and the Geotechnical Report (**Attachment G**) go into details with regards to the servicing of the additional lot. However, to summarise, the lot will be serviced with reticulated electricity and telecommunications, septic and stormwater will be disposed of to site with potable and firefighting water being taken from an existing water scheme. A letter confirming the water right is attached to the application (**Attachment H).**

Variation

The approved landscaping plan under RM950475 includes tree planting in the location of the proposed Lot 2. This is no longer proposed and will be replaced with other plantings. Therefore, a variation to the landscape plan approved under RM950475 (via variation RM120150) is required. Condition 2 of RM950475 as varied by RM120150 reads as follows:

2 *That the activity be undertaken in general accordance with plans submitted with the applications for variation RM060521 pursuant to Section 127 of the Act, stamped as approved 17 August 2006; RM120150 pursuant to Section 127 of the Act, stamped as approved 1 June 2015; and the application and plans submitted with this variation pursuant to Section 127 of the Act, stamped as approved on* ***stamped as approved on 25 March 2015*** *and described as follows:*

- *Drawings by Steward CAD Draughting Ltd, dated 11/12/2014 and referenced*
  - *RC1.0 (Rev F) Stage 2 – Variation Site Plan and Roof Plan*
  - *RC1.1 (Rev F) Stage 2 – Variation Overall Floor Plan*
  - *RC1.2 (Rev F) Stage 2 – Variation Main House Floor Plan*
  - *RC1.4 (Rev F) Stage 2 - Variation Main House Elevations*
  - *RC1.5 (Rev D) Stage 2 Studio Elevations*
- *Drawing by Baxter Design Group and referenced 1554-SK01, October 2011 – Landscape Masterplan.*
- *Drawing titled "Kaye Stalker Proposed House Site – Earthworks" and referenced drawing number 001/05.*
- *Drawing titled "Stalker – Ellis Entry" referenced stalk/ell 15/08/06 and showing an elevation a post and rail constructed entrance feature consisting of 200 x x50 rails on 250 x 250 posts.*
- *Drawing titled "Stalker – Ellis Entry" referenced stalk/ell 17/08/06 and showing clustered tree planting along the driveway.*
- *Subdivision plans submitted with the original application (dated 6 May 1997), already implemented and deposited prior to the 2006 application to vary RM950475.*

The condition is required to be varied to include the new Site Plan **(Attachment C)** by Baxter Design.

2. RESOURCE MANAGEMENT MATTERS

The Queenstown Lakes District Plan has been progressively reviewed since 2015 and the site has been zoned Wakatipu Basin Rural Amenity Zone (WBRAZ) under Stage 2 of the Proposed District Plan (**PDP**) as seen in ***Figure 2*** below.

The subject site is also located within Landscape Character Unit 11 (LCU11): Slope Hill Foothills under the PDP.

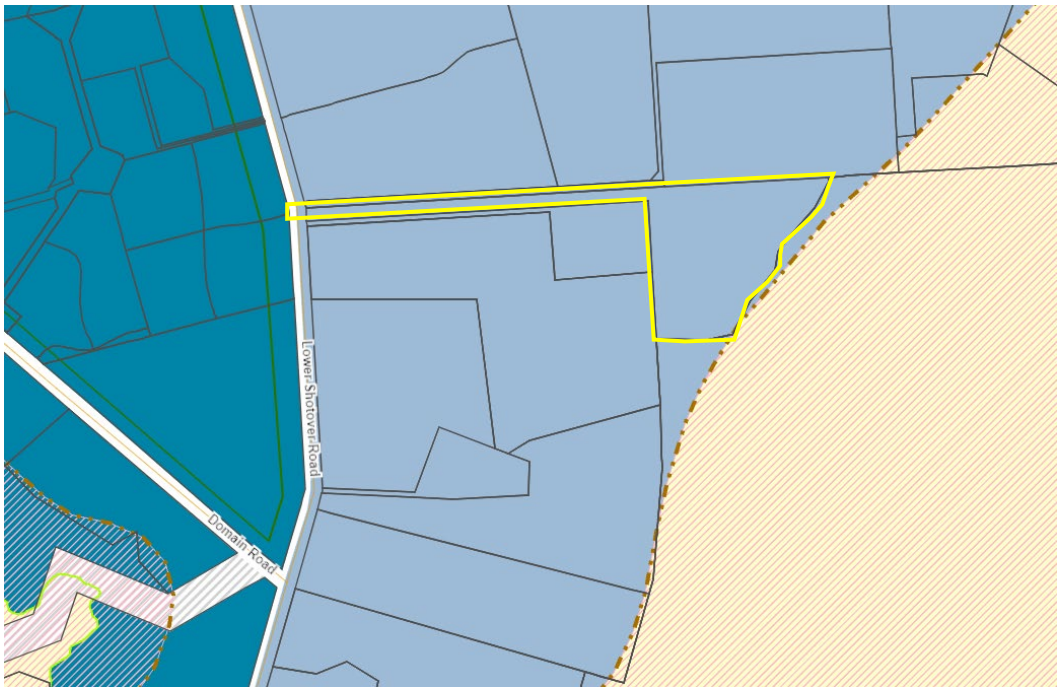


Figure 2. PDP zoning of site, light blue colour illustrates Wakatipu Basin Rural Amenity Zone

As there are outstanding appeals on the PDP provisions of relevance to the proposal and therefore the Operative District Plan (**ODP**) is also of relevance. The subject site is zoned Rural General under the ODP as seen below in ***Figure 3.***

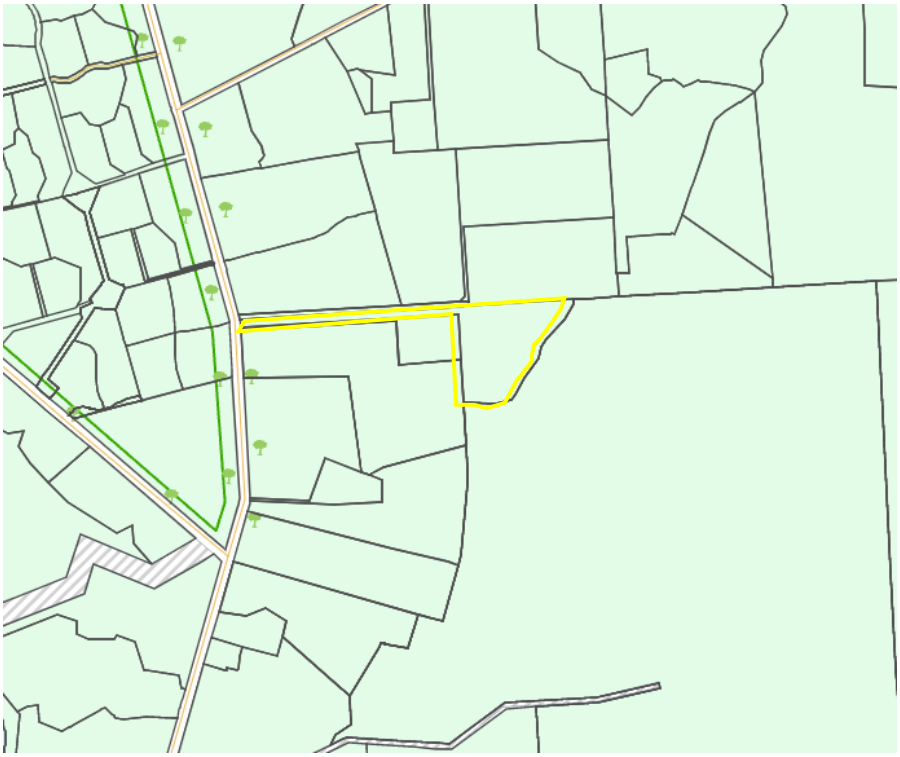


Figure 3. ODP zoning of site, light green colour illustrates the Rural General Zone

The ODP and PDP rules relevant to the application and the consents required are detailed in ***Tables 1 - 4*** below.

Operative District Plan

Table 1. Chapter 15 - Subdivision and Development Activity Rules

Rule	For	Consent required
Chapter 27 – Subdivision Activity Rules		
15.2.3.3	All subdivision and location of residential building platforms	**Yes** – **Discretionary** activity consent required.

Proposed District Plan

Table 2. Chapter 27- Subdivision and Development Activity Rules

Rule	For	Consent required
Chapter 27 – Subdivision Activity Rules		
27.5.9	Subdivision activities in the Wakatipu Basin Rural Amenity Zone	**Yes** – **Restricted Discretionary** activity consent required.

Table 3. Chapter 27- Subdivision and Development Activity Standards

Rule	For	Consent required
Chapter 27 – Subdivision Standards		
27.6.1	No lots to be created by subdivision, including balance lots, shall have a net site area or where specified, an average net site area less than the minimum specified. Wakatipu Basin Rural Amenity Zone – 80 hectares[1]	**Yes – Non-Complying** activity consent required under Rule 27.5.22.
27.7.18	Setback from roads – the minimum setback of any building platform identified through subdivision shall be 20m from a road boundary.	No - complies
27.7.19	Setback from escarpment, ridgeline and river cliff features	Not applicable
27.7.20	Setback from waterbodies – minimum setback of any building platform identified through subdivision from the bed of a wetland, river or lake shall be 30m.	No – the building platform is over 30 metres from the wetland. The irrigation race is not defined as a river under the RMA.
27.7.21	Any building platform shall not be less than 70m² in area and not greater than 1,000m² in area.	No, will comply

Chapter 22- Earthworks Activity Rules

Section 27.4.21 states that earthworks associated with subdivision are subject to the earthworks standards in Chapter 25 with the exception of the following:

Rule 25.2 Maximum volume
Rule 25.5.15 Cut Standard
Rule 25.5.15 Fill Standard

[1] The minimum lot size in the Wakatipu Basin Rural Amenity Zone is subject to appeal

Rule 25.5.21 Cleanfill transported by roads

Table 4. Chapter 25- Earthworks Activity Standards

Rule	For	Consent required
Chapter 25 – Earthworks Activity Standards		
25.5.11	Earthworks over a contiguous area of land shall not exceed the following area: 1. 2,500m² where the slope is 10° or greater.	No, complies as the area of earthworks is a mix of slopes of greater and less than 10° but no more than 2,500m² at 10° or greater.
25.5.12	Erosion and sediment control measures must be implemented and maintained during earthworks to minimise the amount of sediment exiting the site, entering water bodies, and stormwater networks.	No, erosion and sediment measures will be in place.
25.5.13	Dust from earthworks shall be managed through appropriate dust control measures so that dust it does not cause nuisance effects beyond the boundary of the site.	No, dust control measures will be in place.
25.5.14	Earthworks that discover any of the following: 1. kōiwi tangata (human skeletal remains), wāhi taoka (resources of importance), wāhi tapu (places or features of special significance) or other Māori artefact material, or 2. any feature or archaeological material that predates 1900, or 3. evidence of contaminated land (such as discolouration, vapours, landfill material, significant odours), that is not provided for by the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011, any resource consent or other statutory authority, shall comply with the standards and procedures in Schedule 25.10 'Accidental Discovery Protocol'.	No, the site is not a known archaeological site, or a site of known cultural significance, or a contaminated site.
25.5.18	Earthworks greater than 0.5 metres in height or depth shall be set back from the site boundary the following minimum distances: 1. Earthworks not supported by retaining walls: a. a distance at least equal to the maximum height of the fill, as measured from the toe of the fill, with a maximum batter slope angle of 1:3 (vertical: horizontal); or b. 300mm plus a batter slope angle of a maximum of 1:3 (vertical: horizontal), as measured from the crest of the cut. 2. Earthworks supported by retaining walls: a. Cut or fill supported by a retaining wall must be setback a distance at least equal to the height of the retaining wall; b. Cut and fill equal to or less than 0.5m in height is exempt from this rule.	No, will comply. The earthworks taper out towards the boundary to comply.

2.1.1. Summary of consents required

In summary, the following consents are required for the proposal:

Under the ODP:

- A **Discretionary** activity consent pursuant to Rule 15.2.3.3(vi) for subdivision within the Rural General Zone.

Under the PDP:

- A **Restricted Discretionary** activity resource consent pursuant to Rule 27.5.9 as the subdivision is within the Wakatipu Basin Rural Amenity Zone.
- A **Non-Complying** activity resource consent pursuant to Rule 27.5.22 as the subdivision does not meet standard 27.6.1 which requires a minimum lot size in the Wakatipu Basin Rural Amenity Zone of 80 hectares.

Under section 127 of the Resource Management Act:

- **Discretionary** activity resource consent pursuant to section 127(3) for a change of condition 2 of resource consent RM950475 as varied by RM120150.

Other consents:

- The applicant applies for any other consents necessary to enable the proposal.

Overall, resource consent is required for a **Non-Complying** activity.

3. WHERE IT IS LIKELY THAT AN ACTIVITY WILL RESULT IN ANY SIGNIFICANT ADVERSE EFFECT ON THE ENVIRONMENT, A DESCRIPTION OF ANY POSSIBLE ALTERNATIVE LOCATIONS OR METHODS FOR UNDERTAKING THE ACTIVITY:

No significant adverse effects on the environment will arise, and no other alternatives were considered.

4. AN ASSESSMENT OF THE ACTUAL OR POTENTIAL EFFECT ON THE ENVIRONMENT OF THE PROPOSED ACTIVITY:

4.1. Introduction

This assessment of effects on the environment addresses:

- The permitted baseline and existing environment;
- Effects of on landscape and visual amenity values;
- Access and servicing
- Cumulative effects
- Positive effects; and
- Summary of effects on the environment.

4.2. Permitted/consented baseline and existing/receiving environment

When determining the actual and potential effects of an application for resource consent, the permitted baseline allows a comparison of the potential adverse effects of the proposal against what is permitted as of right under the District Plan (the permitted baseline) and what could lawfully be undertaken on the land by way of any existing consents (the existing environment).

4.2.1. Permitted Baseline

Section 104(2) of the Resource Management Act states that when forming an opinion on whether there are adverse effects from an activity on the environment, the consent authority may disregard adverse effects if the plan explicitly permits that certain activity.

Subdivision and identification of building platforms require resource consent under both the Operative and Proposed District Plans therefore there is no permitted baseline in this regard.

4.3. Effects on landscape and visual amenity values

The Landscape Assessment undertaken by Baxter Design (**Attachment C**) states:

> *The LCU places particular emphasis on maintaining existing open views to Slope Hill from western areas, especially from within the Hawthorn Triangle. For the most part, the site is obscured from these views, by the pattern of residential dwellings and vegetation on the western slopes, the hedgerows bordering Lower Shotover Road, and the pattern of mounding and amenity planting within the Hawthorn Triangle itself. The proposed dwelling will be intermittently visible within the viewshafts of **Photo Location 4 and 5**. Although the proposal will be visible between the existing clusters of trees from these areas, when viewing the wider tree line at the base of Slope Hill, the proposed dwelling and mitigation planting will sit below and within the existing pattern of development and will not be discernible against the lower slopes of Slope Hill. The proposed mitigation planting will help screen the proposed dwelling from these views, without impeding views of Slope Hill, and without extending into the pastoral landscape of Slope Hill. The proposed dwelling and mitigation planting will be part of this transitional landscape, characterised by loose groupings of rural dwellings, enclosed by clusters of mixed, exotic vegetation. To that end, any potential adverse effects on the lower slopes of Slope Hill will be low.*

The Landscape Assessment concludes that the *"landscape and visual amenity values of this portion of LCU 11 and Slope Hill will not be adversely affected".*

The lot sizes on the eastern side of Lower Shotover Road range in size from 0.799 hectares to 6.1298 hectares with the predominant lot size being around 4 hectares, confirming that the dominant activity in this area is rural living. A decision was recently issued granting a similar two lot subdivision (RM210318) at 362 Lower Shotover Road, Queenstown. Lot 1 comprised of 6.07 hectares and included an existing dwelling, with Lot 2 being 1.2 hectares in size and containing a building new platform.

The Landscape Assessment states:

> *This application acknowledges that the proposed lot is smaller in size than surrounding rural residential lots (3317m^2), although it is of a similar separation distance (density) to many of the adjacent lots. Given the lack of visibility of the proposal and its location (as described above), it will appear as a continuation of the existing pattern of rural residential development. To that end, the proposal will be of a similar character to the surrounding settlement patterns, consisting of loose groupings of dwellings amongst established clusters of planting, and can therefore be absorbed in this rural residential landscape.*

The area that is proposed to be Lot 2 is an area of unutilised land. It has no value as such to the current site and is not of a size to be viable for any rural use.

Overall, the adverse effects are no more than minor. The landscape and visual amenity values of the site, the LCU, surrounding areas and wider Wakatipu Basin are maintained.

The Landscape Assessment concludes that the *"landscape and visual amenity values of this portion of LCU 11 and Slope Hill will not be adversely affected".*

4.4. Effects of construction earthworks

Conditions requiring adherence to the QLDC Environmental Management Plan Guidelines are anticipated which will mitigate the potential nuisance effects associated with the earthworks that are to be undertaken as part of the subdivision works. Construction noise associated with the subdivision works is anticipated to comply with the Construction Noise Standard set out in the PDP.

The subject site is a medium risk site under the QLDC's Guidelines for Environmental Management Plans. It is anticipated that standard consent conditions will be applied in this regard.

A schist ridge runs between the boundary of Lot 2 and the wetland to the east. Whilst being 36 metres from the building platform, it is also located within a separate catchment, therefore, negating any risk to the wetland.

4.4. Access and servicing

Servicing and Geotech reports **(Attachment D and G)** confirm that adequate servicing is available to service both lots.

The proposed access is adequate in terms of design to also service proposed Lot 2. There will therefore, be no changes in terms of visibility from outside of the site, with only a small portion of access being formed from the existing driveway to meet the building platform.

The effects in terms of access and servicing are less than minor.

4.5. Cumulative effects

Cumulative effects need to take into account the effects of the proposed development in addition to the existing developments within the surrounding environment.

The proposed building platform on Lot 2 is defined by natural topographic features and the building platform, with a dwelling on it, will not be highly visible. The proposal will sustain the existing natural character of the landscape. The proposal has been well considered in terms of character, scale and location and will not breach the landscape's ability to absorb this change.

The access will remain as is with only a small portion needing to be added to reach the building platform. There is no domestic style fencing proposed.

Any adverse cumulative effects of the proposed development on the natural character of the landscape and the potential for over-domestication will therefore be minor.

4.6. Positive effects

The proposal will provide another large lot residential type property in a market demanding more properties such as this.

The land that is identified as Lot 2 is an unutilised portion of mown ground. The proposal utilises this land in a way that is valuable and offer opportunities for others in the community to live on a large residential style lot.

4.7. Summary of effects on the environment

The proposal will have the positive effects of providing additional supply to the general residential market.

When considered overall, effects from the proposal will be no more than minor.

5. ASSESSMENT UNDER THE RELEVANT OBJECTIVES AND POLICIES

5.1. Operative District Plan

The relevant ODP objectives and policies are contained within Sections 4, 5, 15 and 22.

5.1.1 Objectives and Policies – District Wide (Section 4)

Provision	Detail of Provision	Assessment
Objective 1	***The protection and enhancement of indigenous ecosystem functioning and sufficient viable habitats to maintain the communities and the diversity of indigenous flora and fauna within the District.*** ***Improved opportunity for linkages between the habitat communities.*** ***The preservation of the remaining natural character of the District's lakes, rivers, wetlands and their margins.*** ***The protection of outstanding natural features and natural landscapes.*** ***The management of the land resources of the District in such a way as to maintain and, where possible, enhance the quality and quantity of water in the lakes, rivers and wetlands.*** ***The protection of the habitat of trout and salmon.***	The proposed subdivision has been designed so that the predominantly dry wetland is protected by a ridge that runs between the building platform and general the wetland area. The proposal achieves this objective.
Policy 1.13	*To maintain or enhance the natural character and nature conservation values of the beds and margins of the lakes, rivers and wetlands.*	As mentioned above, the building platform on Lot 2 is located 36 metres from the wetland area that is located within a separate gully and catchment.
Policy 1.14	*To consider taking appropriate esplanade reserves of adequate width to protect the natural character and nature conservation values around the margins of any of the District's rivers, lakes, wetlands and streams should any subdivision occur of small lots or any development for residential, recreational or commercial purposes*	As above.
Objective 4.2.5	***Subdivision, use and development being undertaken in the District in a manner which avoids, remedies or mitigates adverse effects on landscape and visual amenity values.***	The location of the building platform on proposed Lot 2 along with the design controls mean that a building will not be visibly prominent and will avoid adverse effects on landscape and visual amenity values. The subdivision design utilises an existing fenceline as part of the separating boundary therefore helping to retain the existing open space and landscape patterns.

Provision	Detail of Provision	Assessment
		The proposal achieves this objective.
Policy 1 - Future Development	*(a) To avoid, remedy or mitigate the adverse effects of development and/or subdivision in those areas of the District where the landscape and visual amenity values are vulnerable to degradation.*	The area surrounding the subject site is made up of relatively small holdings that are predominantly of a rural residential nature. The proposal is in keeping with the existing surrounds and therefore not vulnerable to degradation.
	(b) To encourage development and/or subdivision to occur in those areas of the District with greater potential to absorb change without detraction from landscape and visual amenity values.	The area has the ability to absorb the proposal. A dwelling on the proposed Lot 2 building platform will not detract from the landscape and visual amenity values.
	(c) To ensure subdivision and/or development harmonises with local topography and ecological systems and other nature conservation values as far as possible.	The proposal includes earthworks, however, they are sympathetic to the local topography. The building platform on proposed Lot 2 is located on a relatively flatter portion of land and so harmonises with the local topography. The building platform is not within the same catchment as wetland area to the east of the subject site. This coupled with the separation distance between the two, ensures that the wetlands ecological system is not at risk.
Policy 4 - Visual Amenity Landscapes	*(a) To avoid, remedy or mitigate the adverse effects of subdivision and development on the visual amenity landscapes which are: • highly visible from public places and other places which are frequented by members of the public generally (except any trail as defined in this Plan); and • visible from public roads.*	The subject site is not highly visible from any public place as has been confirmed within the landscape assessment.
	(b) To mitigate loss of or enhance natural character by appropriate planting and landscaping.	Planting is proposed. The planting plan has been designed by Baxter Design and will enhance the natural character.
	(c) To discourage linear tree planting along roads as a method of achieving (a) or (b) above.	No linear planting is proposed.
Policy 8 – Avoiding Cumulative Degradation	(a) *to ensure that the density of subdivision and development does not increase to a point where the benefits of further planting and building are outweighed by the adverse effect on landscape values of over domestication of the landscape.*	The proposed building platform (with a dwelling on it) and plantings will not be highly visible and will not create over domestication of the landscape.
	(b) *to encourage comprehensive and sympathetic development of rural areas.*	The proposal is sympathetic to the existing level of ruralness.

Provision	Detail of Provision	Assessment
9 - Structures	*(a) outstanding natural landscapes and features and visual amenity landscapes by:* • *encouraging structures which are in harmony with the line and form of the landscape;* • *avoiding, remedying or mitigating any adverse effects of structures on the skyline, ridges and prominent slopes and hilltops;* • *encouraging the colour of buildings and structures to complement the dominant colours in the landscape;* • *encouraging placement of structures in locations where they are in harmony with the landscape;* • *promoting the use of local, natural materials in construction.*	The building platform is located in an area that is not highly visible or prominent. Design control have been offered which will help to reduce the visibility and dominance of a dwelling on the platform.
	(b) visual amenity landscapes • *by screening structures from roads and other public places by vegetation whenever possible to maintain and enhance the naturalness of the environment; and*	The site is not located within a visual amenity landscape.
	(c) All rural landscapes by • *limiting the size of signs, corporate images and logos* • *providing for greater development setbacks from public roads to maintain and enhance amenity values associated with the views from public roads.*	No signs, corporate images or logos are proposed. The site is not bordered by any public roads and is also not visually prominent from any public roads.

5.1.2 Objectives and Policies – Rural Areas (Section 5)

Provision	Detail of Provision	Assessment
Objective 1	***To protect the character and landscape value of the rural area by promoting sustainable management of natural and physical resources and the control of adverse effects caused through inappropriate activities.***	The proposal maintains the existing character and landscape values and is not considered an inappropriate activity. The proposal achieves this objective.
Policy 1.1	*Consider fully the district wide landscape objectives and policies when considering subdivision, use*	The district wide objectives and policies have been fully considered and the proposal is consistent with these.

Provision	Detail of Provision	Assessment
	and development in the Rural General Zone.	
Policy 1.2	*Allow for the establishment of a range of activities, which utilise the soil resource of the rural area in a sustainable manner.*	Not applicable
Policy 1.3	*Ensure land with potential value for rural productive activities is not compromised by the inappropriate location of other developments and buildings*	Not applicable
Policy 1.4	*Ensure activities not based on the rural resources of the area occur only where the character of the rural area will not be adversely impacted.*	Not applicable
Policy 1.6	*Avoid, remedy or mitigate adverse effects of development on the landscape values of the District.*	The proposal is not highly visible and is sympathetic to the existing landscape values.
Policy 1.7	*Preserve the visual coherence of the landscape by ensuring all structures are to be located in areas with the potential to absorb change.*	The proposed building platform is located on a relatively flattish portion of the site and is not in a visually prominent area. The land has no rural use and has the ability to absorb change.
Policy 1.8	*Avoid remedy or mitigate the adverse effects of the location of structures and water tanks on skylines, ridges, hills and prominent slopes.*	There are no structures proposed on skylines, ridges, hills or prominent slopes.
Objective 3	***Avoiding, remedying or mitigating adverse effects of activities on rural amenity.***	The proposed subdivision does not affect the existing level of rural amenity. The proposal achieves this objective.
Policy 3.2	*Ensure a wide range of rural land uses and land management practices can be undertaken in the rural areas without increased potential for the loss of rural amenity values*	The subject site and the majority of the surrounding area (other than the one property to the east) are no longer utilised as rural land.
Policy 3.3	*To avoid, remedy or mitigate adverse effects of activities located in rural areas.*	The adverse effects created by the proposal are less than minor.
Policy 3.5	*Ensure residential dwellings are setback from property boundaries, so as to avoid or mitigate adverse effects of activities on neighbouring properties.*	The proposed building platform is adequality set back from the boundary.
Objective 4	***To safeguard the life supporting capacity of water through the integrated management of the effects of activities***	The building platform is not within the same catchment as the wetland area to the east of the subject site. This coupled with the separation distance between the two, ensures that the wetlands ecological system is not at risk. The proposal achieves this objective.

Provision	Detail of Provision	Assessment
Policy 4.2	*To encourage buildings, earthworks and landscaping to be located or carried out a sufficient distance from irrigation infrastructure*	The site is located near a water race, however there is sufficient distance between the two to have no effect on irrigation infrastructure.

5.1.3 Objectives and Policies – Subdivision and Development (Section 15)

Provision	Detail of Provision	Assessment
Objective 1	***The provision of necessary services to subdivided lots and developments in anticipation of the likely effects of land use activities on those lots and within the developments.***	The services report (**Attachment D)** outlines the servicing in detail which allows for the development of the subject site into two lots and therefore, the servicing with a capacity for two dwellings. The proposal achieves this objective.
Policy 1.2	*To ensure safe and efficient vehicular access is provided to all lots created by subdivision and to all developments*	The proposed access is adequate to service the proposed additional lot.
Policy 1.4	*To avoid or mitigate any adverse visual and physical effects of subdivision and development roading on the environment.*	The proposed access utilises the existing access to the site. A right of way is to be created over the access to service the new lot.
Policy 1.5	*To ensure water supplies are of a sufficient capacity, including fire fighting requirements, and of a potable standard, for the anticipated land uses on each lot or development.*	The proposed servicing is adequate in terms of capacity to supply potable and firefighting water to the additional lot.
Policy 1.6	*To ensure that the provision of any necessary additional infrastructure for water supply, stormwater disposal and/or sewage treatment and disposal and the upgrading of existing infrastructure is undertaken and paid for by subdividers and developers in accordance with Council's Long Term Community Plan Development Contributions Policy*	As mentioned above, the services report (**Attachment D)** outlines the servicing in detail which allows for the development of the subject site into two lots and therefore, the servicing with a capacity for two dwellings. All costs will be met by the applicants.
Policy 1.9	*To ensure, upon subdivision or development, that anticipated land uses are provided with means of treating and disposing of sewage in a manner which is consistent with maintaining public health and avoids or mitigates adverse effects on the environment.*	The Services and Geotech reports confirm that adequate sewage treatment is available.
Policy 1.11	*To ensure adequate provision is made for the supply of reticulated energy, including street lighting, and communication facilities for the anticipated land uses, and the method of reticulation is appropriate to the visual amenity values of the area.*	The services report, as previously mentioned, discusses in detail, the supply of services including the adequate supply of reticulated power and telecommunications.
Objective 2	***The costs of the provision of services to and within subdivisions and developments, or the upgrading of services made necessary by that subdivision and development, to the extent that any of those things are***	The applicant proposes to cover the cost of all servicing of the proposed lot. The proposal achieves this objective.

Provision	Detail of Provision	Assessment
	necessitated by the subdivision or development to be met by subdividers.	
Policy 2.1	*To require subdividers and developers to meet the costs of the provision of new services or the extension or upgrading of existing services (including head works), whether provided before or after the subdivision and/or development, and which are attributable to the effects of the subdivision or development.*	As above
Objective 5	***The maintenance or enhancement of the amenities of the built environment through the subdivision and development process.***	The location of the building platform and design controls will ensure that the amenities of the built environment will not be diminished. The proposal achieves this objective.
Policy 5.1	*To ensure lot sizes and dimensions to provide for the efficient and pleasant functioning of their anticipated land uses and reflect the levels of open space and density of built development anticipated in each area.*	Whilst the proposed Lot 2 is smaller than that required in the PDP, it allows for a good level of open space and a good-sized building platform. The lot size is consistent with other lot sizes in the surrounding area. The sloping nature of the site allows for views from the building platform that provide a greater sense of open space.
Policy 5.2	*To ensure subdivision patterns and the location, size and dimensions of lots in rural areas will not lead to a pattern of land uses, which will adversely affect landscape, visual, cultural and other amenity values.*	The proposed subdivision design will not result in adverse visibility and amenity effects due to the location of the building platform, proposed planting and design controls. There are no known specific cultural values in the immediate area of the subject site.
Policy 5.3	*To encourage innovative subdivision design, consistent with the maintenance of amenity values, safe, efficient operation of the subdivision and its services.*	The proposal supports the efficient use of the land. The land currently has no particular use as it is not of an area large enough for any rural type functions and is too large to practically maintain as gardens/lawns.

5.1.4 Objectives and Policies – Earthworks (Section 22)

Provision	Detail of Provision	Assessment
Objective 1	***Enable earthworks that are part of subdivision, development, or access, provided that they are undertaken in a way that avoids, remedies or mitigates adverse effects on communities and the natural environment.***	The proposed earthworks have been designed by the landscape architect to be sympathetic to the existing topography whilst assisting in the screening of a dwelling on the site. The proposal achieves this objective.
Policy 1.1	*Promote earthworks designed to be sympathetic to natural topography where practicable, and that provide safe and stable building sites and access with suitable gradients.*	As mentioned above, the earthworks are sympathetic to the existing topography. The flattening of the building platform will allow for a good base for a dwelling to be constructed. A small portion of vehicle access, with a suitable gradient from the existing driveway to the building platform, is also proposed.

Provision	Detail of Provision	Assessment
Policy 1.2	*Use environmental protection measures to avoid, remedy or mitigate adverse effects of earthworks.*	A management plan will ensure that there are adequate measures in place to ensure that adverse effects are avoided, remedied or mitigated.
Policy 1.3	*Require remedial works and re-vegetation to be implemented in a timely manner.*	It is anticipated that a condition of consent will require this and the applicant accepts that this will be a requirement. A number of plantings have also been proposed that will be undertaken once the earthworks are complete.
Policy 1.4	*Avoid, remedy or mitigate the long term adverse effects of unfinished projects*	The nature of a small subdivision as proposed, ensures that there is limited opportunity for adverse effects created by unfinished projects.
Objective 2	***Avoid, remedy or mitigate the adverse effects of earthworks on rural landscapes and visual amenity areas.***	The proposed earthworks will not be highly visible from any public place. Much of the earthworked area will be hidden by a dwelling and gardens. The proposal achieves this objective.
Policy 2.2	*Avoid, where practicable, or remedy or mitigate adverse visual effects of earthworks on visually prominent slopes, natural landforms and ridgelines.*	The proposed earthworks are not on visually prominent slopes, significant natural landforms or ridgelines.
Policy 2.3	*Ensure cuts and batters are sympathetic to the line and form of the landscape.*	The earthworks have been designed by the landscape architect to be sympathetic to the landscape.
Policy 2.4	*Ensure remedial works and re-vegetation mitigation are effective, taking into account altitude and the alpine environment.*	The earthworked area will be predominantly covered by a dwelling. Those areas not covered will be established as gardens with a number of trees being planted as proposed.

5.2. Proposed District Plan

The site has been rezoned under the PDP as Wakatipu Basin Rural Amenity Zone and there are no outstanding appeals in relation to the zoning of the land. Therefore, an assessment of the relevant objectives and policies of the PDP is provided below.

5.2.1 Objectives and Policies – Strategic Direction (Chapter 3)

Provision	Detail of Provision	Assessment
Strategic Objective 3.2.4	***The distinctive natural environments and ecosystems of the District are protected.***	The existing natural environment will not be diminished by the proposal. The proposed earthworks have been designed to be sympathetic to the natural landform. The proposal achieves this objective.
SO 3.2.4.1	*Development and land uses that sustain or enhance the life-supporting capacity of air, water, soil and ecosystems, and maintain indigenous biodiversity.*	The proposal will meet this policy due to the design of the lots and the building platform. The platform has been located in a different catchment to the wetland area and therefore, sustains the water quality, ecosystems and biodiversity.

Provision	Detail of Provision	Assessment
SO 3.2.4.4	*The natural character of the beds and margins of the District's lakes, rivers and wetlands is preserved, or enhanced where possible, and protected from inappropriate subdivision, use and development.*	The wetland located on site will be adequately preserved with the proposed lot and building platform being located within a separate catchment area, with a schist ridge separating the two.
SO 3.2.5.8 .	*Within the Wakatipu Basin Rural Amenity Zone:* *(a) the landscape character and visual amenity values of the Basin and of its Landscape Character Units, as identified in Schedule 24.8 are maintained or enhanced; and* *(b) the landscape capacity of each Landscape Character Unit and of the Basin as a whole is not exceeded.*	The proposal is consistent with this strategic objective because the LCU values and the Basin's values will be maintained, and development in accordance with the proposal in this rural living location and on this site will not exceed the landscape capacity of the Basin and the LCU.
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.*	The surrounding environment has the ability to absorb the proposal. The building platform coupled with the design controls will ensure that a dwelling is not highly visible and that the natural character will be maintained.
Policy 3.3.25	*That subdivision and / or development be designed in accordance with best practice land use management so as to avoid or minimise adverse effects on the water quality of lakes, rivers and wetlands in the District.*	The proposed subdivision has been designed so that the predominantly dry wetland is protected by a ridge that runs between the building platform and general the wetland area.

5.12.2 Objectives and Policies – Landscapes (Chapter 6)

Provision	Detail of Provision	Assessment
Policy 6.3.1.4	*Provide a separate regulatory regime for the Wakatipu Basin Rural Amenity Zone, within which the Outstanding Natural Feature, Outstanding Natural Landscape and Rural Character Landscape categories and the policies of this Chapter related to those categories do not apply.*	No applicable – see below

Provision	Detail of Provision	Assessment
*Policy 6.3.4.9 **	*In the Wakatipu Basin, avoid planting and screening, particularly along roads and boundaries that would degrade openness where such openness is an important part of its landscape character.*	No lineal or boundary planting has been proposed that could degrade the openness.

5.2.3 Objectives and Policies – Wakatipu Basin (Chapter 24)

Provision	Detail of Provision	Assessment
Objective 24.2.1	**Landscape character and visual amenity values in the Wakatipu Basin are maintained or enhanced**	The Landscape Assessment discusses this objective in detail and concludes that the character and amenity values of the Wakatipu Basin will be maintained. The proposal achieves this objective.
Policy 24.2.1.1X	*Identify in Schedule 24.8 and on the planning maps the landscape capacity of areas outside of the Precinct to absorb subdivision and residential development according to the following rating scale:* *a. Very Low capacity;* *b. Low capacity;* *c. Moderate-Low capacity;* *d. Moderate capacity;* *e. Moderate-High capacity; and* *f. High capacity.*	The site is within LCU11 which has a Low capability to absorb additional development (Schedule 24.8).
Policy 24.2.1.1	*Subdivision or residential development in all areas outside of the Precinct that are identified in Schedule 24.8 to have Very Low, Low or Moderate-Low capacity must be of a scale, nature, and design that:* *a. is not inconsistent with any of the policies that serve to assist to achieve objective 24.2.1; and* *b. ensures that the landscape character and visual amenity values identified for each relevant Landscape Character Unit in Schedule 24.8 and the landscape character of the Wakatipu Basin as a whole are maintained or enhanced by ensuring that landscape capacity is not exceeded.*	This policy is relevant to the proposal because the site is within an LCU with a Low capability rating as per Schedule 24.8. The Landscape Assessment finds that the proposal has the ability to maintain the landscape character and visual amenity values of the Wakatipu Basin. The proposal is not inconsistent with the policies that serve Objective 24.2.1. The landscape character and visual amenity values of LCU11 are maintained by the proposal. The landscape capacity of LCU11, and of the Basin as a whole, is not exceeded, as discussed in the Landscape Assessment. The proposal therefore achieves this policy.
Policy 24.2.1.2	*Ensure subdivision and development is designed (including accessways, services, utilities and building platforms) to minimise inappropriate modification to the natural landform.*	Earthworks are required to flatten the building platform. These earthworks will be relatively minor with the cut and fill blending into the existing landform.
Policy 24.2.1.3	*Ensure that subdivision and development maintains or enhances the landscape*	The proposal will be viewed as part of the existing rural residential landscape. The

Provision	Detail of Provision	Assessment
	character and visual amenity values identified in Schedule 24.8 - Landscape Character Units.	planting around the building platform will have no adverse effect on the open pastoral character of Slope Hill.
Policy 24.2.1.4	*Maintain or enhance the landscape character and visual amenity values of the Rural Amenity Zone including the Precinct and surrounding landscape context by:* a. *controlling the colour, scale, form, coverage, location (including setbacks) and height of buildings and associated infrastructure, vegetation and landscape elements.*	Subdivision design and design controls are proposed that will ensure that this policy is met.
Policy 24.2.1.5	*Require all buildings to be located and designed so that they do not compromise the landscape and amenity values and the natural character of Outstanding Natural Features and Outstanding Natural Landscapes that are either adjacent to the building or where the building is in the foreground of views from a public road or reserve of the Outstanding Natural Landscape or Outstanding Natural Feature.*	As above.
Policy 24.2.1.9	*Control earthworks and vegetation clearance to minimise adverse effects on landscape character and visual amenity values.*	Earthworks are required to flatten the building platform but are minimal in terms of visibility and will only have minimal effects on the landscape character and visual amenity values. No vegetation clearance is proposed.
Policy 24.2.1.11	*Provide for activities that maintain a sense of spaciousness in which buildings are subservient to natural landscape elements.*	The design of the subdivision and positioning of the building platform will allow the sense of openness to remain. The natural landscape elements will remain with a dwelling being nestled amongst these.
Policy 24.2.1.12	*Manage lighting so that it does not cause adverse glare to other properties, roads or public places or degrade views of the night sky.*	No outdoor lighting has been proposed as part of this application, however, it is realistic that a dwelling on the platform would have some outdoor lighting. A condition of consent can be added requiring lighting to be minimal and sympathetic to the surrounding environment.
Policy 24.2.1.15	*Require buildings, or building platforms identified through subdivision, to maintain views from roads to Outstanding Natural Features and the surrounding mountain Outstanding Natural Landscape context, where such views exist; including by:* *a. implementing road setback standards; and* *b. ensuring that earthworks and mounding, and vegetation planting within any road setback, particularly where these are for building mitigation and/or privacy, do not detract from views to Outstanding*	The proposal will not inhibit views from roads to any Outstanding Natural Features or Landscape. The building platform and a dwelling located on it will be nestled into the slope of the subject site.

Provision	Detail of Provision	Assessment
	Natural Features or Outstanding Natural Landscapes; while *c. recognising that for some sites, compliance with a prescribed road setback standard is not practicable due to the site size and dimensions, or the application of other setback requirements to the site.*	
Objective 24.2.4	***Subdivision and development, and use of land, maintains or enhances water quality, ecological quality, and recreation values while ensuring the efficient provision of infrastructure.***	Water and ecological quality will be maintained by the locating of the building platform in a different catchment of the wetland. The proposal includes adequate infrastructure. The proposal achieves this objective.
Policy 24.2.4.1	*Avoid adverse cumulative impacts on ecosystem services and nature conservation values*	As above.
Policy 24.2.4.4	*Provide adequate firefighting water and emergency vehicle access to ensure an efficient and effective emergency response.*	Water supply will be adequate for firefighting purposes. A condition of consent is anticipated that will ensure that this is provided.
Policy 24.2.4.9	*Encourage the planting, retention and enhancement of indigenous vegetation that is appropriate to the area and planted at a scale, density, pattern and composition that enhances indigenous biodiversity values, particularly in locations such as gullies and riparian areas, or to provide stability*	There is no indigenous vegetation that will be removed or disturbed as a result of the proposal. No indigenous planting is proposed.

5.1.8 Objectives and Policies – Earthworks (Chapter 25)

Provision	Detail of Provision	Assessment
Objective 25.2.1	***Earthworks are undertaken in a manner that minimises adverse effects on the environment, including through mitigation or remediation, and protects people and communities.***	Environmental management controls will be in place for the duration of the earthworks in accordance with the QLDC's Environmental Management Plan Guidelines. This will ensure that potential adverse effects are minimized through mitigation and remediation. The proposal achieves this objective.
Policy 25.2.1.1	*Ensure earthworks minimise erosion, land instability, and sediment generation and offsite discharge during construction activities associated with subdivision and development.*	As above
Policy 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;*	As above

Provision	Detail of Provision	Assessment
	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.*	
Policy 25.2.1.3	*Avoid, where practicable, or remedy or mitigate adverse visual effects of earthworks on visually prominent slopes, natural landforms and ridgelines*	The earthworks have been designed by a landscape architect to be sympathetic to the natural landforms and to avoid visibility as much as possible. The earthworks once complete, will be virtually imperceivable.
Policy 25.2.1.4	*Manage the scale and extent of earthworks to maintain the amenity values and quality of rural and urban areas.*	The proposed earthworks will create a flat building platform and access to the site. They have been designed to be as minimal as possible and to be sympathetic to the amenity of the area.
Policy 25.2.1.5	*Design earthworks to recognise the constraints and opportunities of the site and environment.*	The earthworks design recognises the opportunity for the site to contain a building platform. The proposal achieves this objective.
Policy 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.*	There is no existing infrastructure in the close vicinity of the proposed earthworks.
Policy 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.*	As previously mentioned, environmental management controls will be in place for the duration of the earthworks in accordance with the QLDC's Environmental Management Plan Guidelines. This will ensure that potential adverse effects are minimized through mitigation and remediation. The proposal achieves this objective.
Policy 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.*	An Accidental Discovery Protocol will be implemented during the earthworks. The proposal achieves this objective.

Provision	Detail of Provision	Assessment
Policy 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.*	As previously mentioned, environmental management controls will be in place for the duration of the earthworks in accordance with the QLDC's Environmental Management Plan Guidelines. This will ensure that potential adverse effects are minimized through mitigation and remediation. The proposal achieves this objective.

5.1.9 Objectives and Policies – Subdivision and Development (Chapter 27)

Provision	Provision Detail	Assessment
Objective 27.2.1	***Subdivision that will enable quality environments to ensure the District is a desirable place to live, visit, work and play.***	The proposed subdivision is designed to provide a desirable site for residential use and will not detract from the outside environment. The proposal achieves this objective.
Policy 27.2.1.1	*Require subdivision infrastructure to be constructed and designed so that it is fit for purpose, while recognizing opportunities for innovative design.*	Adequate, fit for purpose infrastructure is to be provided as part of the subdivision.
Policy 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.*	The proposed lot is adequate in size and shape for the construction of a good sized dwelling with plentiful outdoor space. Adequate services are proposed to accommodate a future dwelling.
Policy 27.2.1.4	*Discourage non-compliance with minimum allotment sizes. However, where minimum allotment sizes are not achieved in urban areas, consideration will be given to whether any adverse effects are mitigated or compensated by providing:* *a. desirable urban design outcomes;* *b. greater efficiency in the development and use of the land resource;* *c. affordable or community housing.*	The minimum lot size of 80 hectares is not met by this proposal. Therefore, the proposal is contrary this policy.
Policy 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.*	The proposed building platform will allow for the construction of a dwelling within the proposed lot and therefore, meets this policy.
Objective 27.2.5	***Infrastructure and services are provided to new subdivisions and developments.***	Adequate infrastructure is to be provided as part of the subdivision.
Transport, Access and Roads		
Policy 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.*	The proposal provides safe and efficient access by all modes of transport via the existing access.

Provision	Provision Detail	Assessment
Policy 27.2.5.4	*Ensure the physical and visual effects of subdivision and roading are minimized by utilizing existing topographical features.*	The proposal utilises the existing access and therefore, meets this policy.
Policy 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.*	The proposal utilises the existing access and therefore, meets this policy.
Water supply, stormwater, wastewater		
Policy 27.2.5.7	*Ensure water supplies are of a sufficient capacity, including firefighting requirements, and of a potable standard, for the anticipated land uses on each lot of development.*	There is adequate water supply available to service both lots.
Policy 27.2.5.9	*Encourage initiatives to reduce water demand and water use, such as roof rain water capture and use and greywater recycling.*	The proposal is for a subdivision and building platform only. A condition of consent could be added to require rain water capture and greywater recycling. The proposal is not contrary to this policy.
Policy 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 firefighting purposes;* *c) the standard of water supply installed in subdivisions, and the adequacy of existing supply system outside the subdivision;* *d) any initiatives proposed to reduce water demand and water use.*	There is adequate water supply available to service both lots.
Policy 27.2.5.11	*Ensure appropriate storm water 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*	The Geotech report identified that the site is suitable for on-site disposal with a specific design to follow once a dwelling has been fully designed.

Provision	Provision Detail	Assessment
	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.	
Policy 27.2.5.12	*Encourage subdivision design that includes the joint use of stormwater and flood management networks with open spaces and pedestrian/cycling transport corridors and recreational opportunities where these opportunities arise and will maintain the natural character and ecological values of the wetlands and waterways.*	There are no stormwater or flood management networks in place and no opportunities for transport or recreational corridors. The proposal is not contrary to this policy.
Policy 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.*	The site has been identified as suitable for onsite treatment with a specific design to follow once the dwelling is fully designed. Therefore, the proposal is consistent with this requirement.
Policy 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.*	As above
Policy 27.2.5.15	*Ensure that the design and provision of any necessary infrastructure at the time of subdivision takes into account the requirements of future development on land in the vicinity.*	The proposed servicing takes into account the requirement of future development of the land which includes the construction of a dwelling on proposed Lot 2. Therefore, the proposal is consistent with this requirement.
Policy 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*	Adequate reticulated supply is available to service the extra lot. The proposal achieves this policy.

Provision	Provision Detail	Assessment
	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		
Policy 27.2.5.17	*Ensure that services, shared access and public access is identified and managed by the appropriate easement provisions.*	The proposed easements have been identified on the Scheme Plans.
Policy 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 proposal is considered to achieve this policy.

5.2.1. Conclusion – Objectives and Policies of the PDP

The proposal is consistent with the relevant objectives and policies from Chapters 7 and 29 of the PDP.

5.3. Regional Policy Statement, Regional Plans and other planning instruments

The Otago Regional Policy Statement (RPS) sets the direction for future management and promotion of the sustainable management of the region's natural and physical resources, as well as providing the policy context for regional plans and establishing the framework for district plans.

The Partially Operative RPS 2019 (PORPS2019) was declared partially operative on 15 March 2021, at which time the RPS 1998 was also revoked. Following a 2019 review of the region's freshwater management framework and the introduction in 2020 of new national regulations, the PORPS2019 has now been reviewed, and the Proposed Otago Regional Policy Statement 2021 (PRPS2021) was notified on 26 June 2021. Hearings for non-freshwater aspects of the PRPS2021 are scheduled commencing January 2023.

The PRPS2021 identifies eleven significant resource management issues for the region and explains how national direction will be applied in the Otago context. The eleven issues can be broken down into natural asset-based issues, place-based issues, and those issues relating to economic and domestic pressures, cumulative impacts and resilience.

The proposed development has been considered against the objectives and policies of the PORPS2019 and the PRPS2021. The development is generally consistent with the broad policy direction of both Regional Policy Statements, noting that the more detailed and mostly settled provisions of the PDP, and the WBRAZ, give effect to the regional instruments.

More specifically, the regional instruments' objectives and policies for economic and social well-being, integrated management of resources, nature conservation values (water quality etc), and urban growth and development are not engaged by this proposal. On landscapes, the key relevant RPS policy is:

Policy 3.2.6 ***Managing highly valued natural features, landscapes and seascapes***

Maintain or enhance highly valued natural features, landscapes and seascapes by all of the following:

a) Avoiding significant adverse effects on those values that contribute to the high value of the natural feature, landscape or seascape;

b) Avoiding, remedying or mitigating other adverse effects;

c) Encouraging enhancement of those values that contribute to the high value of the natural feature, landscape or seascape.

The proposal would maintain the landscape values of the Site and wider area, and of the Wakatipu Basin would be maintained, and significant adverse effects would be avoided through the location of the Site, the measures proposed for built form and landscaping, and the existing WBRAZ controls on external materials and colours of built development. The policy is therefore achieved.

The key relevant themes in the pRPS21 are the same or very similar to those in the PORPS19, and to avoid repetition those pRPS21 themes are not further assessed, and the above conclusions apply. However, there is one additional theme in the pRPS21 relating to rural / rural lifestyle activities. Policy UFD-P7 states:

UFD-P7 Rural Areas

The management of rural areas:

(1) provides for the maintenance and, wherever possible, enhancement of important features and values identified by this RPS,

(2) outside areas identified in (1), maintains the productive capacity, amenity and character of rural areas,

(3) enables primary production particularly on land or soils identified as highly productive in accordance with LF–LS–P19,

(4) facilitates rural industry and supporting activities,

(5) directs rural residential and rural lifestyle development to areas zoned for that purpose in accordance with UFD–P8,

(6) restricts the establishment of residential activities, sensitive activities, and non-rural businesses which could adversely affect, including by way of reverse sensitivity, the productive capacity of highly productive land, primary production and rural industry activities, and

(7) otherwise limits the establishment of residential activities, sensitive activities, and non-rural businesses to those that can demonstrate an operational need to be located in rural areas.

It is noted that this policy is subject to submissions in opposition. No decisions have yet been made on those submissions and therefore limited weight can be applied to them.

The proposal is potentially contrary to clause (5) above because the land is not specifically zoned for the purpose of rural residential or rural lifestyle purposes, even though that is the primary (indeed only) activity in the lower slopes of Slope Hill in this area; the area has a long-established rural living character. Clauses (6) and (7) apply to residential activities. The proposal is consistent with Clause 6 in that no reverse sensitivities arise and there are no effects on productive capacity of highly productive land, and the proposal is for rural living which requires a rural location.

The proposal is therefore, overall, broadly consistent with the regional instruments.

5.4. National Environmental Standard

In accordance with the National Standard for Assessing and Managing Contaminants in the Soil, all applications for resource consent need to be determined if they apply under this National Environmental Standard (NES).

The regulations apply if any of the following activities are undertaken:

(a) remove or replace an underground fuel storage system or any of its parts

(b) sample the soil to determine contamination

(c) disturb the soil (earthworks)

(d) subdivide the land

(e) change the use of the land.

A search of the records held by the Queenstown Lakes District Council and Otago Regional Council's records has not provided any indication of the site being utilised in the past for a HAIL activity. Therefore, the NES is not considered to be of relevance to the current application.

5.5. National Policy Statement – Highly Productive Soils

The National Policy Statement – Highly Productive Soils (**NPS-HPL**) requires that regional councils map as "highly productive land" any land in its region that is in a general rural zone or rural production zone; is predominantly Land Use Capability (**LUC**) 1, 2, or 3 land; and forms a large and geographically cohesive area. The mapping is to be notified and when operative, territorial authorities must map the highly productive land in their districts. Until the regional council's mapping is operative, each territorial authority and consent authority must apply the NPS-HPL as if references to highly productive land were references to land zoned general rural or rural production; and is LUC 1, 2, or 3 land; but is not identified for future urban development or subject to a Council initiated, or an adopted, notified plan change to rezone it from general rural or rural production to urban or rural lifestyle.

Although farming is a permitted activity in the WBRAZ (and also in the subzone the Wakatipu Basin Lifestyle Precinct (**WBLP**)) the purpose of the WBRAZ / WBLP zones is not to protect land for farming purposes. Rather, the purpose of the WBRAZ / WBLP zones is to maintain or enhance landscape and visual amenity values, and maintaining land for farming and rural production is a means to achieve that end, not an end in itself.

The WBRAZ / WBLP therefore cannot be regarded as a "general rural zone" or a "rural production zone" for the purposes of the NPS-HPL.

If any further assessment under the NPS-HPL is required, the Manaaki Whenua mapping shows that the soils of the Site are LUC 3 and LUC 5, and that part this is LUC 3 would therefore constitute "highly productive land" under the NPS-HPL's definition and under Clause 3.5(7)(a)(ii). Relevant policies of the NPS-HPL are:

Policy 7: The subdivision of highly productive land is avoided, except as provided in this National Policy Statement.

Policy 8: Highly productive land is protected from inappropriate use and development.

Clause 3.9 (Protecting highly productive land from inappropriate use and development) subclause (2) states that a use or development of highly productive land is inappropriate except where at least one of a number of matters apply to the use or development, and the measures in subclause (3) are applied. Subclause (2)(g) states:

(g) it is a small-scale or temporary land-use activity that has no impact on the productive capacity of the land

The proposal is a small-scale subdivision of an existing small scale rural living property within an area that has a long-established rural living character and no active productive farming. The proposal will have no impact on the productive capacity of the land, and is therefore not inappropriate, and achieves Policy 8. The subdivision therefore does not need to be avoided under Policy 7.

Subclause (3) states:

(3) Territorial authorities must take measures to ensure that any use or development on highly productive land:

(a) minimises or mitigates any actual loss or potential cumulative loss of the availability and productive capacity of highly productive land in their district; and

(b) avoids if possible, or otherwise mitigates, any actual or potential reverse sensitivity effects on land-based primary production activities from the use or development.

Given the established rural living character of this area and the lack of any primary production activities, there is no actual or cumulative loss of the availability and productive capacity of highly productive land, and no potential for reverse sensitivities.

6. NON-COMPLYING ACTIVITY - SECTION 104D ASSESSMENT

Pursuant to section104D of the Resource Management Act if a proposal is a Non-Complying activity then it must pass at least one of the tests of either section 104D(1)(a) or section 104D(1)(b) before an application can be assessed to make a decision under section 104B of the Act. If the application fails both tests of section 104D then the application must be declined.

6.1. Section 104D(1)(a) – Adverse effects on the environment will be minor

Section 104D(1)(a) of the Act requires that the Council have regard to any adverse effects on the environment of allowing the activity.

The effects of the proposal are assessed in Section 4 of this document. The conclusion from Part 3 (assessment of the effects on the environment) the adverse effects on the environment of allowing the activity for which resource consent is sought were identified and assessed in this Assessment of Environmental Effects above, where it was concluded that the proposal will result in less than minor effects.

Therefore, the adverse effects on the environment will be no more than minor, and the test of s104D(1)(a) is satisfied.

6.2. Section 104D(1)(b) – Proposal will not be contrary to the objectives and policies of the District Plan

The relevant objectives and policies for the proposal are assessed in Section 5 above. It concludes that the proposal is not contrary to the objectives and policies of the ODP and two polices of the PDP.

Accordingly, the proposal does not pass s1.4D(1)(b).

7. PAT 2 OF THE RESOURCE MANAGEMENT ACT 1991

7.1. Section 5 – Purpose

The purpose of the Act is "to promote the sustainable management of natural and physical resources". Section 5(2) of the Act defines "sustainable management" as:

> *… managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while –*
>
> *(a) Sustaining the potential of natural and physical resources … to meet the reasonably foreseeable needs of future generations; and*
>
> *(b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
>
> *(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

The proposal addresses the matters in section 5(2)(a)-(c) of the Act. The applicant has taken care to avoid or mitigate any potential adverse effects of the proposal on the environment through the design of the proposal. The proposal enables a new rural living site, contributing to the demand for this type of property and enabling owners to benefit from living within a rural living area and the amenities of the location.

The proposal therefore achieves the purpose of the Act.

7.2. Section 6 – Matters of national importance

No section 6 issues are engaged by the proposal.

7.3. Section 7 – Other matters

The relevant matters of Section 7 of the Act that should be considered as follows:

b. the efficient use and development of natural and physical resources:

c. the maintenance and enhancement of amenity values:

f. maintenance and enhancement of the quality of the environment:

g. any finite characteristics of natural and physical resources:

The proposal is an efficient use of the land, providing for a new rural living site in an area with a long-established rural living character, utilising existing roading, and having acceptable effects on landscape values. The amenity values and quality of the environment will continue to be maintained. Areas such as this site, which can absorb new small-scale rural living opportunities within the Wakatipu Basin, while maintaining the values of the site and environs, the LCU and the wider Basin, are a finite resource.

The proposal is therefore consistent with the relevant s7 matters.

8. WHERE THE ACTIVITY INCLUDES THE USE OF HAZARDOUS SUBSTANCES AND INSTALLATIONS, AN ASSESSMENT OF ANY RISKS TO THE ENVIRONMENT WHICH ARE LIKELY TO ARISE FROM SUCH USE:

Not applicable.

9. A DESCRIPTION OF THE MITIGATION MEASURES (SAFEGUARDS AND CONTINGENCY PLANS WHERE RELEVANT) TO BE UNDERTAKEN TO HELP PREVENT OR REDUCE THE ACTUAL AND POTENTIAL EFFECT:

No mitigation measures are necessary.

10. IDENTIFICATION OF AFFECTED PERSONS AND SECTION 95A ASSESSMENT

Section 95A of the RMA requires a decision on whether or not to publicly notify an application.

The steps set out below, in the order given, are used to determine whether to publicly notify an application for a resource consent.

Step 1 – Mandatory public notification

The applicant is not requesting public notification of the application (s95A(3)(a)).

Public notification is not mandatory as a result of a refusal by the applicant to provide further information or refusal of the commissioning of a report under section 92(2)(b) of the RMA (s95A(3)(b)).

The application does not involve the exchange of recreation reserve land under section 15AA of the Reserves Act 1977 (s95A(3)(c)).

Therefore, public notification is not required by Step 1.

Step 2 – Public notification precluded

Public notification is not precluded by any rule or national environmental standard (s95A(5)(a)).

The proposal is not:

- a controlled activity; or
- a boundary activity as defined by section 87AAB that is restricted discretionary, discretionary or non-complying.

Public notification is not precluded (s95A(5)(b)(i)-(iii)). Therefore, public notification is not precluded by Step 2.

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

Public notification is not specifically required under a rule or national environmental standard (s95A(8)(a)).

A consent authority must publicly notify an application if it decides, in accordance with s95D, that the proposed activity will have or is likely to have adverse effects on the environment that are more than minor (s95A(8)(b)).

An assessment in this respect is therefore undertaken as follows:

Effects that must be disregarded (s95D(a)) include effects on the owners or occupiers of land on which the activity will occur and on adjacent land. Effects that may be disregarded include:

- An adverse effect of the activity if a rule or national environmental standard permits an activity with that effect (s95D(b));
- Trade competition and the effects of trade competition (s95D(d)); and
- Effects on persons who have provided their written approval.

On the basis of the assessment set out in Section 3 above, the proposed activities will not have adverse effects on the environment that are more than minor. Therefore, public notification is not required under Step 3.

Step 4 – public notification in special circumstances

There are no special circumstances in relation to this application.

11. LIMITED NOTIFICATION (S95B)

Section 95B requires a decision on whether there are any affected persons.

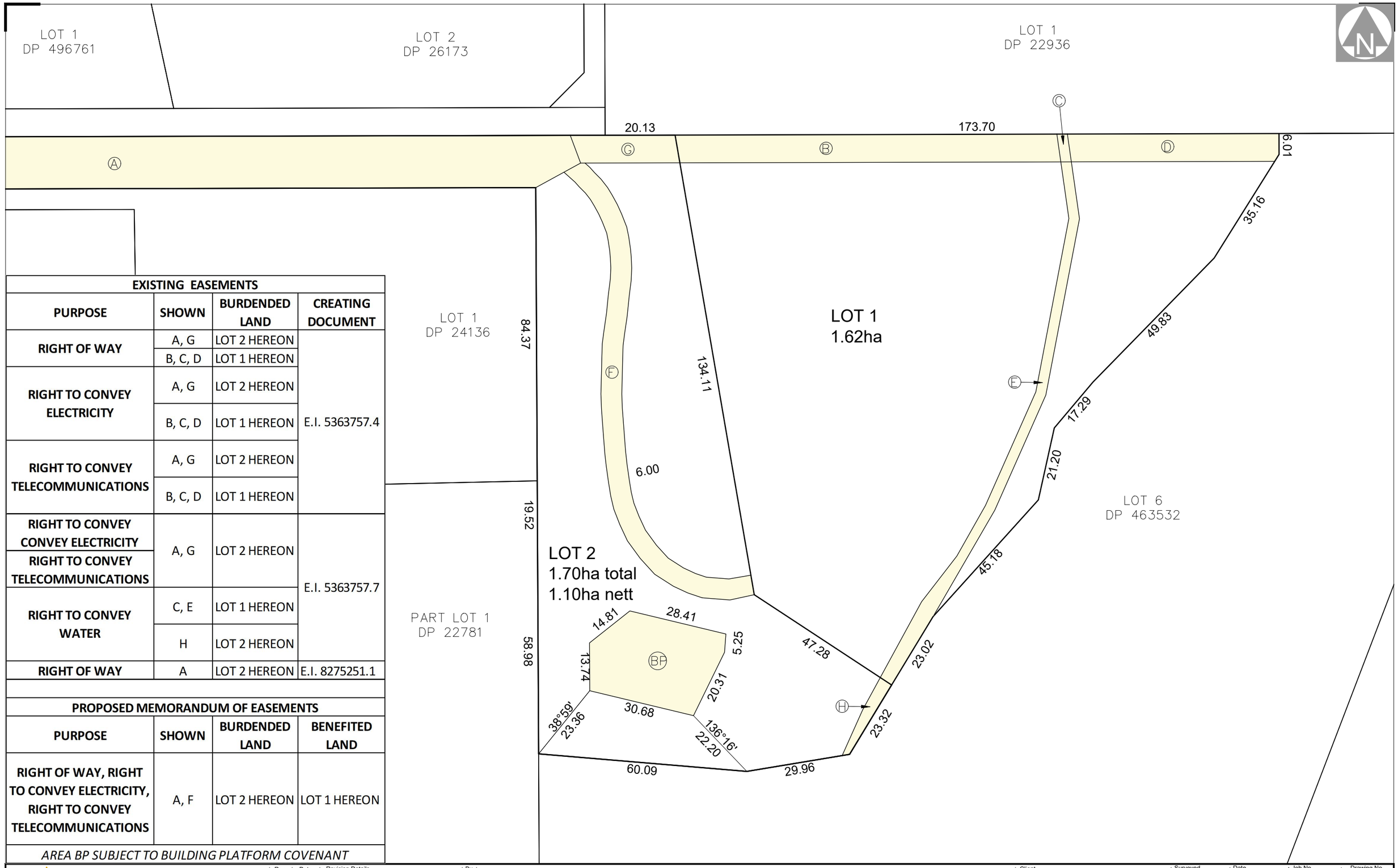
There are no affected groups or persons under section 95B(2) or 95B(3), and limited notification is not precluded as it is not subject to a rule or standards precluding notification and it is not a controlled activity (s95B(6)).

Therefore, the assessment of affected persons must be undertaken in accordance with section 95E.

Overall, any effects from the proposal are less than minor and limited notification is therefore not required.

12. WHERE THE SCALE OR SIGNIFICANCE OF THE ACTIVITY'S EFFECT ARE SUCH THAT MONITORING IS REQUIRED, A DESCRIPTION OF HOW, ONCE THE PROPOSAL IS APPROVED, EFFECTS WILL BE MONITORED AND BY WHOM.

No monitoring is required apart from that normally undertaken by a Council in monitoring consent conditions.



EXISTING EASEMENTS			
PURPOSE	**SHOWN**	**BURDENDED LAND**	**CREATING DOCUMENT**
RIGHT OF WAY	A, G	LOT 2 HEREON	E.I. 5363757.4
	B, C, D	LOT 1 HEREON	
RIGHT TO CONVEY ELECTRICITY	A, G	LOT 2 HEREON	
	B, C, D	LOT 1 HEREON	
RIGHT TO CONVEY TELECOMMUNICATIONS	A, G	LOT 2 HEREON	
	B, C, D	LOT 1 HEREON	
RIGHT TO CONVEY CONVEY ELECTRICITY	A, G	LOT 2 HEREON	E.I. 5363757.7
RIGHT TO CONVEY TELECOMMUNICATIONS			
RIGHT TO CONVEY WATER	C, E	LOT 1 HEREON	
	H	LOT 2 HEREON	
RIGHT OF WAY	A	LOT 2 HEREON	E.I. 8275251.1

PROPOSED MEMORANDUM OF EASEMENTS			
PURPOSE	**SHOWN**	**BURDENDED LAND**	**BENEFITED LAND**
RIGHT OF WAY, RIGHT TO CONVEY ELECTRICITY, RIGHT TO CONVEY TELECOMMUNICATIONS	A, F	LOT 2 HEREON	LOT 1 HEREON

AREA BP SUBJECT TO BUILDING PLATFORM COVENANT

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

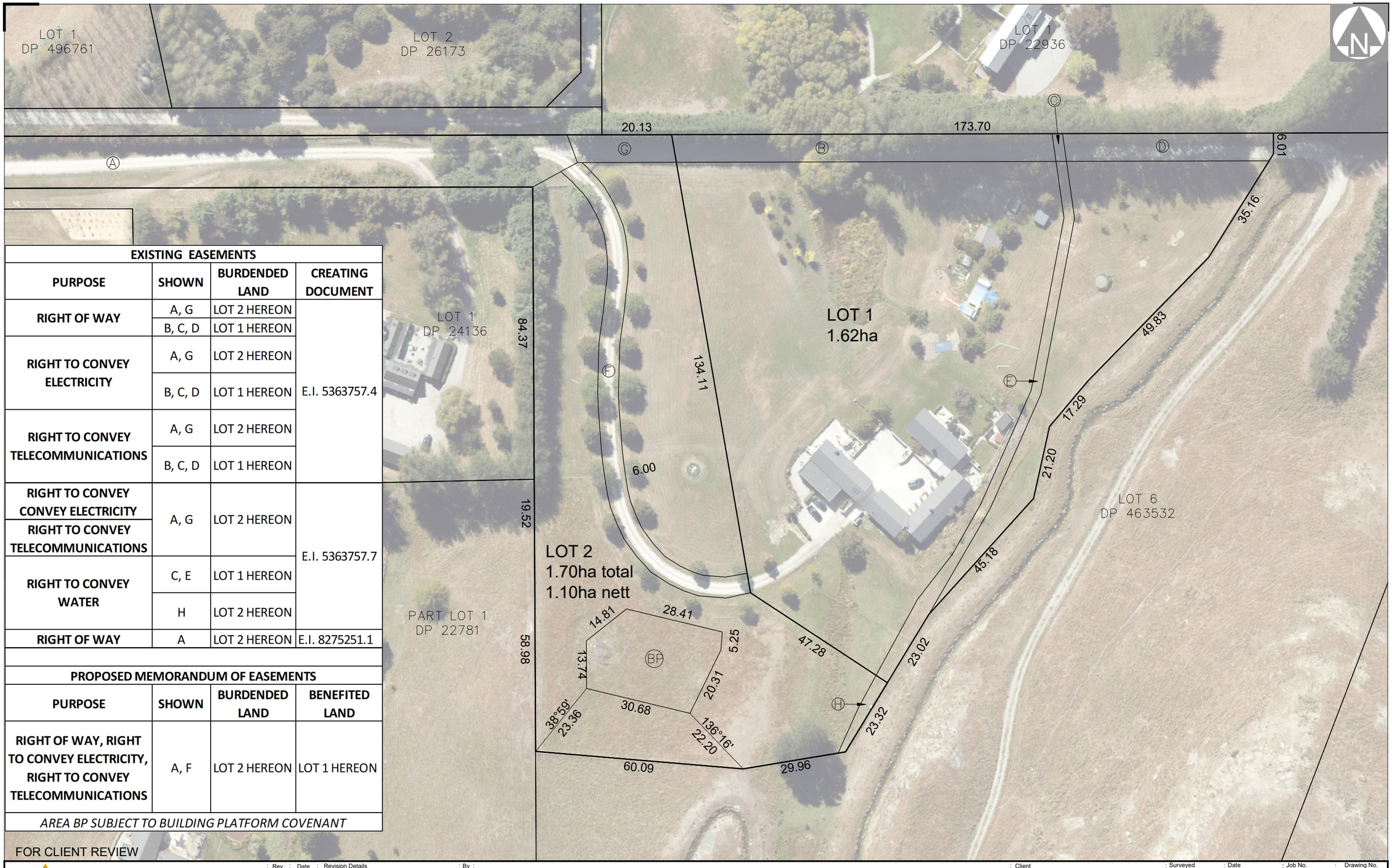
Rev.	Date	Revision Details	By
A	1.03.23	Add BP ties	BM
B	11.09.23	Reconfigure lot boundaries	BM

LOT 1 & 2 BEING A PROPOSED SUBDIVISION OF LOT 1 DP 304273

LOWER SHOTOVER ROAD, SPEARGRASS FLAT, QUEENSTOWN

Client: KAYE STALKER	Surveyed: –	Date: –	Job No.: 15792	Drawing No.: 01 Sheet 001	
Notes: All dimensions shown are in meters unless shown otherwise. Any person using Clark Fortune McDonald drawings and other data accepts the risk of: - Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions. - Ensuring the information is the most recent issue. - Copyright on this drawing is reserved.	Drawn: BM	Date: 19.09.22	Scale: 1:500 @ A1, 1:1000 @ A3		
	Checked: CH	Date: –	Datum & Level: MT NIC 2000 -	Rev.: B	

S:\JOBS\15700\15792\acad\15792_01b_Scheme Plan.dwg Plotted: 11.09.2023



EXISTING EASEMENTS			
PURPOSE	**SHOWN**	**BURDENDED LAND**	**CREATING DOCUMENT**
RIGHT OF WAY	A, G	LOT 2 HEREON	E.I. 5363757.4
	B, C, D	LOT 1 HEREON	
RIGHT TO CONVEY ELECTRICITY	A, G	LOT 2 HEREON	
	B, C, D	LOT 1 HEREON	
RIGHT TO CONVEY TELECOMMUNICATIONS	A, G	LOT 2 HEREON	
	B, C, D	LOT 1 HEREON	
RIGHT TO CONVEY CONVEY ELECTRICITY	A, G	LOT 2 HEREON	E.I. 5363757.7
RIGHT TO CONVEY TELECOMMUNICATIONS			
RIGHT TO CONVEY WATER	C, E	LOT 1 HEREON	
	H	LOT 2 HEREON	
RIGHT OF WAY	A	LOT 2 HEREON	E.I. 8275251.1

PROPOSED MEMORANDUM OF EASEMENTS			
PURPOSE	**SHOWN**	**BURDENDED LAND**	**BENEFITED LAND**
RIGHT OF WAY, RIGHT TO CONVEY ELECTRICITY, RIGHT TO CONVEY TELECOMMUNICATIONS	A, F	LOT 2 HEREON	LOT 1 HEREON
AREA BP SUBJECT TO BUILDING PLATFORM COVENANT			

FOR CLIENT REVIEW

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By
A	1.03.23	Add BP ties	BM
B	11.09.23	Reconfigure lot boundaries	BM

LOT 1 & 2 BEING A PROPOSED SUBDIVISION OF LOT 1 DP 304273

LOWER SHOTOVER ROAD, SPEARGRASS FLAT, QUEENSTOWN

Client: KAYE STALKER	Surveyed: –	Date: –	Job No.: 15792	Drawing No.: 01 Sheet 002	
Notes: All dimensions shown are in meters unless shown otherwise. Any person using Clark Fortune McDonald drawings and other data accepts the risk of: - Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions. - Ensuring the information is the most recent issue. - Copyright on this drawing is reserved.	Drawn: BM	Date: 19.09.22	Scale: 1:500 @ A1, 1:1000 @ A3		
	Checked: CH	Date: –	Datum & Level: MT NIC 2000 -	Rev.: B	

S:\JOBS\15700\15792\acad\15792_01b_Scheme Plan.dwg Plotted: 11.09.2023

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **17310**

Land Registration District **Otago**

Date Issued 03 October 2002

Prior References

OT13B/867 OT14D/624

Estate Fee Simple

Area 3.3307 hectares more or less

Legal Description Lot 1 Deposited Plan 304273

Registered Owners

Kaye Valma Stalker and Kieran Edward Tohill as to a 73/100 share

Shane David Muir, Victoria Mary Robertson and Property & Business Trustees Limited as to a 27/100 share

---

Interests

462350.1 Fencing Provision 14.7.1976 at 2.40 pm (affects part formerly CT OT13B/867)

Land Covenant in Deed 769961.5

Land Covenant in Deed 829946.6 - 18.5.1993 at 9.26 am (affects part formerly CT OT13B/867)

Land Covenant in Deed 829946.9 - 18.5.1993 at 9.26 am (affects part formerly CT OT13B/867)

Land Covenant in Deed 829946.12 - 18.5.1993 at 9.26 am (affects part formerly CT OT13B/867)

Land Covenant in Deed 842026.3 - 5.11.1993 at 10.16 am (affects part formerly CT OT13B/867)

Land Covenants in Deed 862985.4 - 18.8.1994 at 9.45 am (affects part formerly CT OT13B/867)

876500 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 23.2.1995 at 9.30 am (affects part formerly CT OT13B/867)

Subject to a right of way,right to convey electricity & telecommunications over part marked A,B,C,D DP 304273 created by Easement Instrument 5363757.4 - 3.10.2002 at 3:07 pm

Appurtenant hereto is a right to convey water created by Easement Instrument 5363757.4 - 3.10.2002 at 3:07 pm

The easements created by Easement Instrument 5363757.4 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto are rights to store & convey water created by Transfer 5363757.5 - 3.10.2002 at 3:07 pm

Some of the easements created by Transfer 5363757.5 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right to draw & convey water created by Transfer 5363757.6 - 3.10.2002 at 3:07 pm

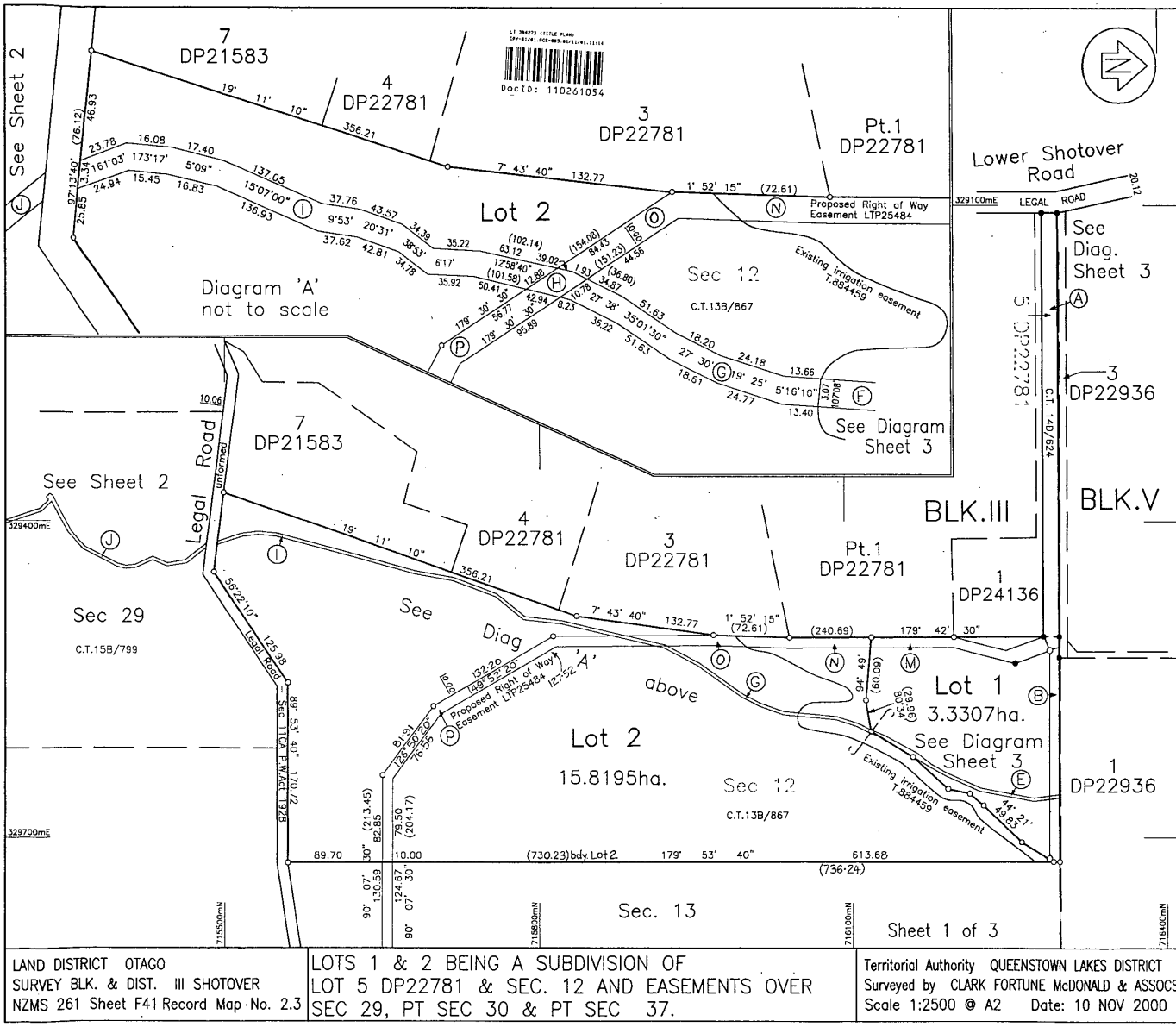
The easement created by Transfer 5363757.6 is subject to Section 243 (a) Resource Management Act 1991

Subject to a right to convey electricity & telecommunications over part marked A,B DP 304273 and a right to convey water over part marked C,E DP 304273 created by Easement Instrument 5363757.7 - 3.10.2002 at 3:07 pm

7002361.1 CAVEAT BY AURORA ENERGY LIMITED - 24.8.2006 at 9:00 am

Subject to a right of way over part marked A on DP 304273 created by Easement Instrument 8275251.1 - 12.1.2010 at 2:55 pm

9907610.2 Mortgage to ASB Bank Limited - 13.2.2015 at 12:34 pm



Approvals:

I hereby certify that this plan was approved by the Queenstown Lakes District Council pursuant to Section 223 of the Resource Management Act 1991 on the 8 day of December 2001 subject to the granting or reserving of the easements set out in the memorandum hereon and subject to the amalgamation condition set out hereon.

Chief Executive Officer

Amalgamation condition:
"That Lot 2 hereon and Lot 7 DP21583 and Sections 13, 33, 103, 104 and 108 Block III Shotover Survey District (residue CT 13B/867) be held in the same certificate of title (see CSN request 449)".

New Certificates of Title Allocated	
Lot 1	CT17310
Lot 2	CT17311

See sheet 3 for Schedules of Easements

REGISTRAR-GENERAL OF LAND NEW ZEALAND

CLASS OF SURVEY: Lot 1 II Lot 2 III
DATUM: GEODETIC 1949
CIRCUIT: MT. NICHOLAS

Total Area: 19.1502ha.

Comprised in: C.T's. 14D/624, 13B/867Pt, 15B/799Esmt.only and 13B/200Esmt.only

I, Neil Thomas McDonald, being a person entitled to practise as a registered surveyor, certify that –
(a) The surveys to which this dataset relates are accurate, and were undertaken by me or under my direction in accordance with the Survey Act 1986 and the Survey Regulations 1998:
(b) This dataset is accurate, and has been created in accordance with that Act and those Regulations.

Signed N.M.Donald
this 30th day of October 2001

Field Book.....p..... Traverse Book.....p.....
Reference Plans: DP25659 DP24136 DP23848 DP22936 DP22781 DP21583 DP21444 DP21410 DP21360 LTP25484 SO6430 SO1497
Examined..... Correct.....

Approved as to Survey
19/12/01 Chief Surveyor

Deposited this 2 day of December 2002
for Registrar-General of Land ~~District Land Registrar~~

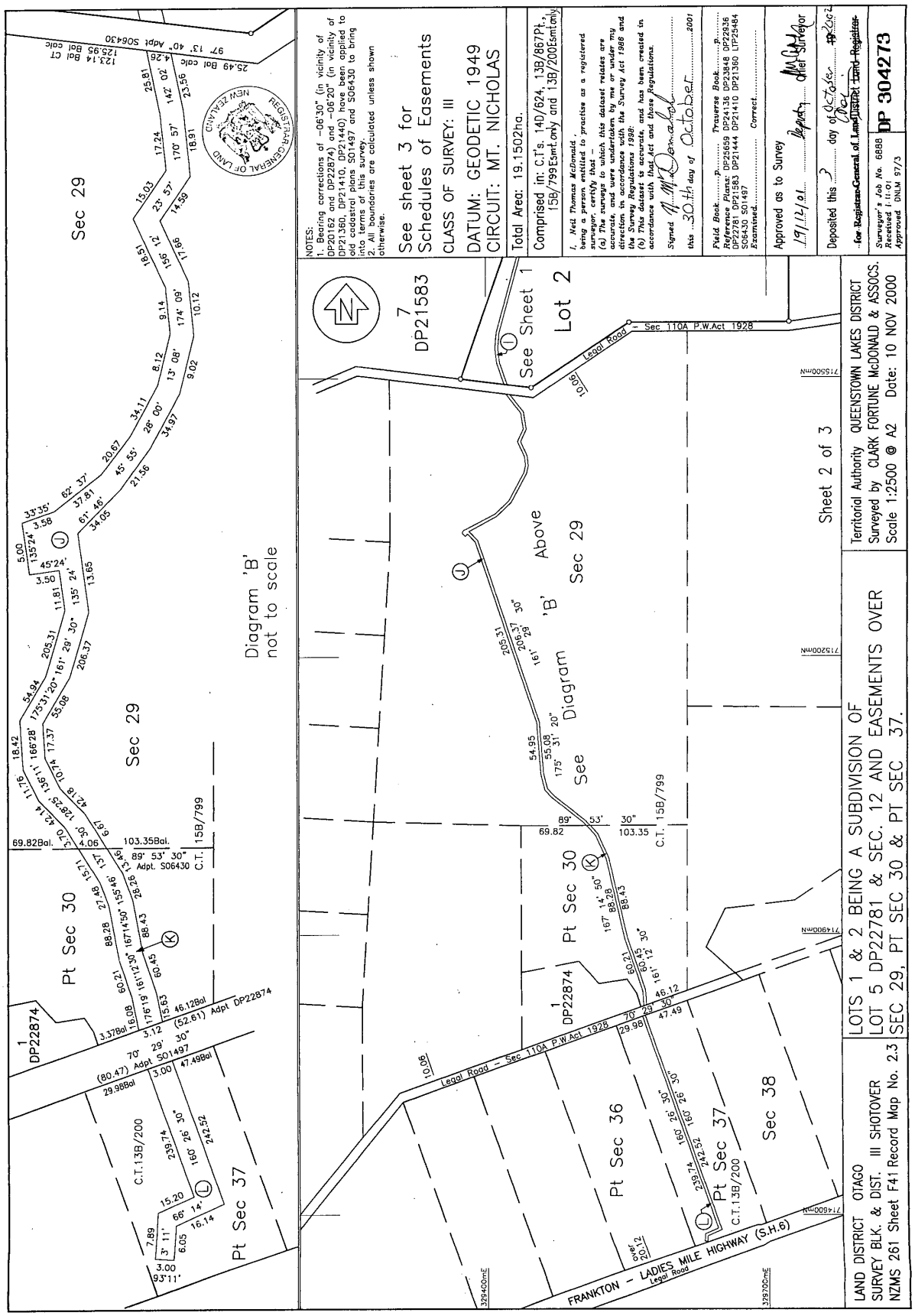
Surveyor's Job No. 6888
Received 1-11-01
Approved DNLM 97/3

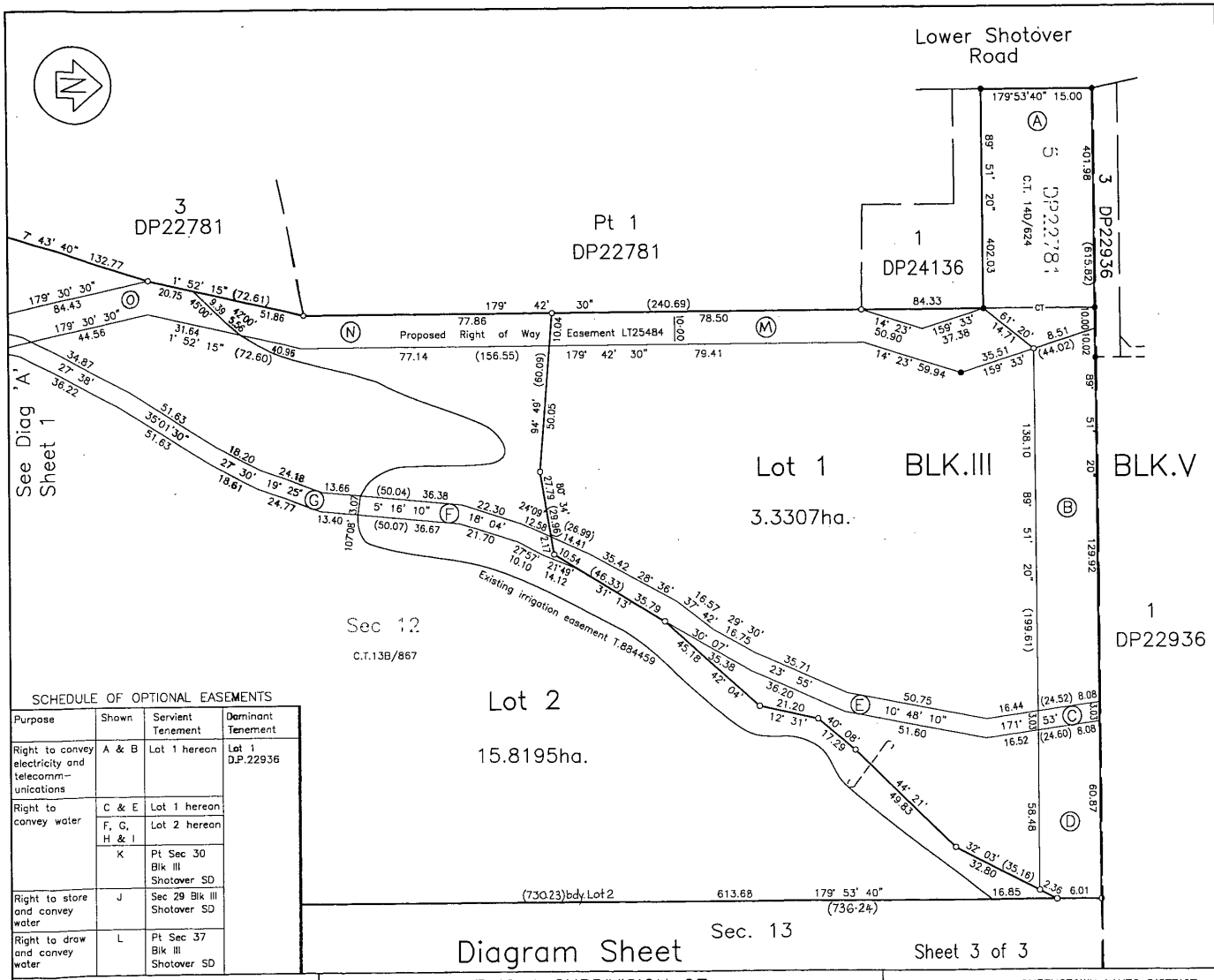
DP 304273

LAND DISTRICT OTAGO
SURVEY BLK. & DIST. III SHOTOVER
NZMS 261 Sheet F41 Record Map No. 2.3

LOTS 1 & 2 BEING A SUBDIVISION OF LOT 5 DP22781 & SEC. 12 AND EASEMENTS OVER SEC 29, PT SEC 30 & PT SEC 37.

Territorial Authority QUEENSTOWN LAKES DISTRICT
Surveyed by CLARK FORTUNE McDONALD & ASSOCS.
Scale 1:2500 @ A2 Date: 10 NOV 2000





SCHEDULE OF OPTIONAL EASEMENTS

Purpose	Shown	Servient Tenement	Dominant Tenement
Right to convey electricity and telecommunications	A & B	Lot 1 hereon	Lot 1 D.P.22936
Right to convey water	C & E	Lot 1 hereon	
	F, G, H & I	Lot 2 hereon	
	K	Pt Sec 30 Blk III Shotover SD	
Right to store and convey water	J	Sec 29 Blk III Shotover SD	
Right to draw and convey water	L	Pt Sec 37 Blk III Shotover SD	

LAND DISTRICT OTAGO
SURVEY BLK. & DIST. III SHOTOVER
NZMS 261 Sheet F41 Record Map No. 23

LOTS 1 & 2 BEING A SUBDIVISION OF LOT 5 DP22781 & SEC. 12 AND EASEMENTS OVER SEC 29, PT SEC 30 & PT SEC 37.

Territorial Authority QUEENSTOWN LAKES DISTRICT
Surveyed by CLARK FORTUNE McDONALD & ASSOCS.
Scale: Not to Scale Date: 10 NOV 2000

Approvals:

MEMORANDUM OF EASEMENTS

Purpose	Shown	Servient Tenement	Dominant Tenement
Right of Way, Right to convey electricity and telecommunications	A, B, C & D	Lot 1 hereon	Lot 2 hereon and Sec.13 Blk.III Shotover S.D.
Right to convey water	F, G, H & I	Lot 2 hereon	Lot 1 hereon
	K	Pt Sec 30 Blk III Shotover SD	Lots 1 and 2 hereon
Right to store and convey water	J	Sec 29 Blk III Shotover SD	Lots 1 and 2 hereon
Right to draw and convey water	L	Pt Sec 37 Blk III Shotover SD	Lots 1 and 2 hereon

PROPOSED EASEMENTS

Purpose	Shown	Servient Tenement	Dominant Tenement
Right of Way	A, M	Lot 1 hereon	Lots 1-3 LT25484
	N, O, H, P	Lot 2 hereon	

CLASS OF SURVEY: Lot 1 II
Lot 2 III

DATUM: GEODETIC 1949
CIRCUIT: MT. NICHOLAS

Total Area: 19.1502ha.

Comprised in: C.T's. 14D/624, 13B/867 Pt., 15B/799 Esmt only and 13B/200 Esmt only

I, Neil Thomas McDonald, being a person entitled to practise as a registered surveyor, certify that –
(a) The surveys to which this dataset relates are accurate, and were undertaken by me or under my direction in accordance with the Survey Act 1986 and the Survey Regulations 1998;
(b) This dataset is accurate, and has been created in accordance with that Act and those Regulations.

Signed N. M. Donald
this 30th *day of* October 2001

Field Book.....p..... *Traverse Book*.....p.....
Reference Plans: DP25659 DP24136 DP23848 DP22936 DP22781 DP21583 DP21444 DP21410 DP21360 LTP25484 S06430 S01497
Examined..... *Correct*.....

Approved as to Survey
19/12/01 ..... Chief Surveyor

Deposited this 3 day of October 2002
.....for Registrar-General of Land/District Land Registrar

Surveyor's Job No. 6888
Received 1-11-01
Approved DNLM 97/3

DP 304273

SCHEDULE A

Area	Legal Description	Certificate of Title	Encumbrances
23.7023 ha	Section 29 and part Sections 30 and 31 Block III Shotover Survey District	15B/799	1. Section 308(4) Local Government Act 1974 2. Irrigation Agreement X16141 3. 462350/1 Fencing Provision 4. Easement Certificate 754597/2 5. Easements created by Transfers 462350/1, 769961/4, 769961/6, 769961/7, 769961/10, 769961/12, 769962 6. Land Covenants in Deed 769961/5 7. Mortgage 812858 8. Easements created by Transfers 829946/5, 829946/8, 829946/11, 834400/2, 838259/2, 842026/2, 850246/3, 850246/6, 862985/3 9. Land covenants in Deeds 829946/6, 829946/9, 829946/12, 834400/3, 838259/3, 842026/3, 850246/4, 850246/7, 862985/4
80.9830 ha	Lot 7 Deposited Plan 21583 and sections 12, 13, 33, 103 104 and 108 Block III Shotover Survey District	13B/867	1. Section 308(4)(5) Local Government Act 1974 2. 462350/1 Fencing Provision 3. Mortgage 812858 4. Reservations and conditions imposed by Section 59 Land Act 1948 5. Easements created by Transfers 769961/4, 769961/6, 769961/7 and 769962

wpg\docs\106m

Area	Legal Description	Certificate of Title	Encumbrances
			6. Land Covenants in Deed 769961/5 7. Easements created by Transfers 829946/5, 829946/8, 829946/11, 842026/2 8. Land covenants in Deeds 829946/6, 829946/9, 829946/12, 842026/3, 862985/4
20.2343 ha ✓	Sections 32, 41, 42, 43 and 44 Block III Shotover Survey District ✓	10D/383 ✓	1. 462350/1 Fencing Provision 2. 474208 Gazette Notice 3. 812858 Mortgage

Correct for the purposes of the Land Transfer Act

Solicitor for the Parties

wpg\docs\106m

QUEENSTOWN LAKES DISTRICT COUNCIL

CONSENT NOTICE PURSUANT TO SECTION 221 RESOURCE MANAGEMENT ACT 1991

IN THE MATTER of Lot 7 Deposited Plan 21583 and Sections 12, 13, 29, Part ~~29~~ 30, Part 31, 32, 33, 41, 42, 43, 44, 103, 104 and 108 Block III Shotover Survey District (Otago Land Registry)

AND

IN THE MATTER of Subdivision Consent pursuant to Sections 105, 108, 220 and 221 of the Resource Management Act 1991

Pursuant to Section 108(2) of the Resource Management Act 1991 the Queenstown Lakes District Council by resolution passed under delegated authority on 9 April 1992 imposed the following condition on the subdivision of Lot 7 Deposited Plan 21583 and Sections 29, 30 and Part 31 Block III Shotover Survey District:

"a. That no further dwelling may be erected upon that balance farm property as an accessory to the existing farming use now being carried out on that balance farm property;

b. That (this restriction) shall have effect during the five year period commencing on the date of this Resource Consent. At the completion of the five year period the Council will review the matter and determine if (this restriction) should continue. The review can be undertaken in terms of Section 128(a)(i) of the Resource Management Act 1991."

For the purpose of condition (a) detailed above, the "balance farm property" comprises that area containing ~~124.8998~~ 124.9196 hectares being Lot 7 Deposited Plan 21583 and Sections 12, 13, 29, Part ~~29~~ 30, Part 31, 32, 33, 41, 42, 43, 44, 103, 104 and 108 Block III Shotover Survey District described in Certificates of Title 13B/867 and 10D/383 and ~~the balance of Certificate of Title 12A/464 remaining after the subdivision of Lot 1 containing 7580 m² (Otago Registry)~~ 15B/799 as more particularly described in attached Schedule A.

The "date of this Resource Consent" pursuant to condition (b) above, being the date the Resource Consent was issued, is 22 April 1992.

DATED at Queenstown this 13 day of OCTOBER 1992

KEITH GRANTHAM
CHIEF EXECUTIVE

(Principal Administration Officer for
Queenstown Lakes District Council)

CONSENT NOTICE PURSUANT TO SECTION 221 RESOURCE MANAGEMENT ACT

QUEENSTOWN LAKES DISTRICT COUNCIL

Particulars entered in the Register as shown in the Schedule of Land herein on the date and at the time stamped below:

.....
District/Assistant Land Registrar of the District of Otago

ANDERSON LLOYD
SOLICITORS
QUEENSTOWN
g50.doc

Landscape Assessment
208A Lower Shotover Road

INTRODUCTION

1. This landscape assessment is prepared by Baxter Design to assess the potential landscape character and visual effects of a proposed subdivision and dwelling at 208A Lower Shotover Rd, of the land legally described as Lot 1 DP 304273.

2. The following report includes:

    - Description of the site and background,
    - Description of the proposal,
    - Landscape assessment,
    - Conclusion.

3. The following Attachments are included in this report:

Attachment A:	Context and Photo Location Plan	4325-SK10
Attachment B:	Lot Plan	4325-SK11
Attachment C:	Site Plan	4325-SK15
Attachment D:	Landscape Assessment Photo 1	4325-SK07
Attachment E:	Landscape Assessment Photo 2	4325-SK08
Attachment F:	Landscape Assessment Photo 3	4325-SK09
Attachment G:	Landscape Assessment Photo 4 + 5	4325-SK13
Attachment H:	Landscape Assessment Photo 6 + 7	4325-SK14
Attachment I:	Site Panorama	4325-SK12

DESCRIPTION OF THE WIDER LANDSCAPE CHARACTER AND SITE

4. The site is located on the southern portion of Landscape Character Unit 11 (LCU 11), on the upper portion of an established rural living landscape. That pattern of development extends from the site west to Lower Shotover Road and the area known as the "Hawthorn Triangle" (LCU 9), and east to Slope Hill, an outstanding natural feature (ONF). LCU 11 is described as a "*rural lifestyle zone*" with dwellings on lots of mixed sizes, with the balance between 4-10ha. The northern portion of LCU 11 displays a typical, open, pastoral landscape, set amongst "*a complex patterning of hills, ranging from moderate to steeply sloping in places."*

5. In the western and southern portions of LCU 11, the landform slopes down moderately towards Lower Shotover Road. The "western slopes" (as labelled in LCU 11) are characterised by loose groupings of established residential dwellings amongst clusters of mature, exotic vegetation, with all the trappings of a rural residential landscape, including established dwellings and gardens, gravel driveways, shelterbelts, small paddocks and established trees, fences, sheds and hedges. The vegetation is denser in this area compared to the northern area of LCU 11, which is mostly made up of exotic, mature trees, amenity planting and occasional hedgerows lining properties and driveways, with a high degree of species variety when compared to surrounding areas. The PDP describes the loose groupings of established dwellings in these areas as "*reasonably enclosed, despite their elevation"* – largely due to the vegetation.

6. Approximately 1.5-2km west of the site, over the Shotover River is Tucker Beach Road, flanked by residential development. To the north-west of the site, on a flat, river terrace, lies the rural-residential development known as the Hawthorn Triangle, a name derived from the extensive planting of hawthorn hedges along Domain Road, Lower Shotover Road, and Speargrass Flat Road. LCU 9 notes that "*generally, the Triangle displays a large-lot suburban parkland character*," with "*dwellings set into mounding and a planted, parkland character."* The LCU 11 description notes the "*importance of the western slopes as a contrasting and highly attractive backdrop to the intensive patterning throughout the Hawthorn Triangle."*

7. East and adjacent to the site is Slope Hill, an open, rising pastoral hillside, classified as an outstanding natural feature (ONF). The western slopes of LCU 11, including the residential areas east of Lower Shotover Road, act as a transitional zone between the more intensive rural residential zone of the Hawthorn Triangle, and the of Slope Hill ONF. The site lies at a similar elevation to other rural lifestyle blocks to the north, and slightly below a previously approved RBP approximately 250m south of the site.

8. The proposed RBP is situated in the southern portion of Lot 1 DP 304273, and will be accessed by the existing driveway on that Lot. The site sits on a rolling, northwest facing landform in pastoral grass. The landform slopes moderately down to the north and rises slightly steeper to the east, towards Slope Hill. There is an existing dwelling on Lot 1 DP 304273, which is located approximately 50m from the closest point of the proposed RBP.

DESCRIPTION OF THE PROPOSAL

9. The proposed dwelling on the RBP will be located in the south-west of Lot 1 DP 304273, as part of a proposed subdivision of the existing Lot. The total area of Lot 1 DP 304273 is currently 33370m^2, with the proposed subdivision being 3317m^2. (Refer **Attachment B**)

10. The proposed RBP is 839m^2, with the floor level of the future dwelling to be set at R.L. datum 423masl. Earthworks will be required to create the flat building platform and outdoor areas. (Refer **Attachment C**)

11. Entry to the proposed RBP will be from the existing driveway on Lot 1 DP 304273, as shown on **Attachments B and C.**

12. The proposal includes mitigation tree planting, consisting of Western Red Cedars and Dutch "Lobel" Elms.

13. The proposed dwelling will be subject to design controls prepared by Baxter Design, outlined in **Appendix A**. A summary of the key design controls is outlined below:

- Maximum building height of 5.5m
- Maximum building site coverage of 50% of the RBP.
- Light reflectance value (LRV) of roofs to be less than 20%
- LRV of exterior cladding to be less than 30%
- Gabled roofs

LANDSCAPE ASSESSMENT

14. Under the Operative District Plan (ODP), the subject site is located within the Rural Amenity Zone. Under the Proposed District Plan (PDP), the site is located within LCU 11 – Slope Hill 'Foothills.' The south-eastern edge of this character unit borders Slope Hill, an Outstanding Natural Feature (ONF).

15. This landscape assessment will review the relevant matters set out in Chapter 24 of the PDP and refer to relevant matters in the LCU 11 description, assessing the alignment of the proposed development against those matters.

16. The effects scale used in this assessment is outlined in Table 1 below. This effects scale is based on the New Zealand Institute of Landscape Architects (NZILA) 'Landscape Assessment and Sustainable Management 10.1' Best Practice Note.

Visibility

17. The extent of potential visibility is outlined below:

- From approximately 200m length of Dalefield Road, between 3200m and 3400m from the site (**Attachment D**)
- For approximately 500m on Tucker Beach Road, between 1600m and 2100m from the site (**Attachment E + F**)
- Intermittently from the south-eastern areas of the Hawthorn Triangle, between 700m and 1200m from the site (**Attachment G + H**)
- The site is not visible from Domain Road due to the hedgerows along Domain Road and vegetation in front of the proposed RBP.
- The Context and Photo Location Plan (**Attachment A**) shows the locations of the Landscape Visual Assessment Photographs.

PDP – Chapter 24 – Wakatipu Basin

18. ***Objective 24.2.1 - Landscape character and visual amenity values in the Wakatipu Basin are maintained or enhanced.***

19. The LCU 11 describes the potential landscape issues and constraints associated with additional development as:

- *Potential visibility of development throughout western hillslopes in particular.*

- *Importance of the western slopes as a contrasting and highly attractive backdrop to the intensive patterning throughout the Hawthorn Triangle, particularly in views from within the triangle.*
- *Importance of existing open views to Slope Hill.*
- *Environment Court history suggest that the capacity has been fully exploited in most parts of the LCU.*

20. The LCU places particular emphasis on maintaining existing open views to Slope Hill from western areas, especially from within the Hawthorn Triangle. For the most part, the site is obscured from these views, by the pattern of residential dwellings and vegetation on the western slopes, the hedgerows bordering Lower Shotover Road, and the pattern of mounding and amenity planting within the Hawthorn Triangle itself. The proposed dwelling will be intermittently visible within the viewshafts of **Photo Location 4 and 5**. Although the proposal will be visible between the existing clusters of trees from these areas, when viewing the wider tree line at the base of Slope Hill, the proposed dwelling and mitigation planting will sit below and within the existing pattern of development and will not be discernible against the lower slopes of Slope Hill. The proposed mitigation planting will help screen the proposed dwelling from these views, without impeding views of Slope Hill, and without extending into the pastoral landscape of Slope Hill. The proposed dwelling and mitigation planting will be part of this transitional landscape, characterised by loose groupings of rural dwellings, enclosed by clusters of mixed, exotic vegetation. To that end, any potential adverse effects on the lower slopes of Slope Hill will be low.

21. From areas beyond the Hawthorn Triangle, the proposal will be visually integrated into the setting of established trees and residential development even further, due to the mitigating effects of distance, with existing views of Slope Hill maintained.

22. The LCU 11 describes the "sense of place" as:

    Generally, the area reads as a mixed rural and rural residential landscape. The elevated portions of the area read as a rural residential landscape 'at, or very near, its limit'.

23. The LCU 11 describes the "settlement pattern" as:

    Dwellings generally located to enjoy long-range basin and mountain views. Older rural residential development tends to be well integrated by planting and/or localised landform patterns. Newer rural residential is considerably more exposed, with buildings sited to exploit landform screening (where possible). Clustered development evident in places, [with] numerous consented but unbuilt platforms (43).
    Typical lot sizes:
    - *Evenly distributed mix*
    - *One property 100-500ha range, another 50-100ha.*
    - *Balance typically shared lots or 4-10ha range*

24. The LCU 11 describes the "*capability to absorb additional development*" as Low

25. This application acknowledges that the proposed lot is smaller in size than surrounding rural residential lots (3317m^2), although it is of a similar separation distance (density) to many of the adjacent lots. Given the lack of visibility of the proposal and its location (as described above), it will appear as a continuation of the existing pattern of rural residential development. To that end, the proposal will be of a similar character to

the surrounding settlement patterns, consisting of loose groupings of dwellings amongst established clusters of planting, and can therefore be absorbed in this rural residential landscape.

26. Overall, the landscape character and amenity values of the Wakatipu Basin LCU 11, will not be adversely affected by this development.

PDP Chapter 24 Policies

27. **24.2.1.2** ***Ensure subdivision and development is designed (including accessways, services, utilities and building platforms) to minimise inappropriate modification to the natural landform.***

28. The proposed RBP will require some earthworks to create a flat building platform and a relatively flat outdoor area (refer **Attachment C**). These earthworks will be relatively minor and will give rise to a short temporary effect only, with the cut and fill blending into the existing

29. **24.2.1.3** ***Ensure that subdivision and development maintains or enhances the landscape character and visual amenity values identified in Schedule 24.8 - Landscape Character Units.***

30. As described in points 27 to 30 above, the proposal will be viewed as part of the established rural residential landscape. The scale of planting around the proposed RBP will have no adverse effect on the open pastoral character of Slope Hill. From a wider landscape perspective, the proposed development will have no adverse effects on the landscape values of the wider Whakatipu Basin given that the proposed development is essentially located 'within' an existing framework of well-established rural residential development and, from wider views towards the site. Will be barely discernible within that framework.

31. **24.2.1.5** ***Require all buildings to be located and designed so that they do not compromise the landscape and amenity values and the natural character of Outstanding Natural Features and Outstanding Natural Landscapes that are either adjacent to the building or where the building is in the foreground of views from a public road or reserve of the Outstanding Natural Landscape or Outstanding Natural Feature.***

32. As described above.

33. ***Provide for activities that maintain a sense of spaciousness in which buildings are subservient to natural landscape elements.***

34. The proposed dwelling will occupy a minor part of the rural residential landscape of the western slopes of Slope Hill. As described above, the scale of the proposed mitigation planting will be perceived as a miniscule part of the wider established existing rural residential landscape.

35. ***24.2.5.1 Provide for rural living, subdivision, development and use of land in a way that maintains***

36. Described above

37. ***24.2.5.5 Encourage the retention and planting of vegetation that contributes to landscape character and visual amenity values of the Precinct, particularly where vegetation is identified as an important element in Schedule 24.8, provided it does not present a high risk of wilding spread.***

38. The mitigation planting will be of a mix of deciduous and evergreen tree clusters, contributing to the patterning of vegetation of the surrounding area, whilst maintaining views of Slope Hill from western areas.

CONCLUSION

39. Taking into account the location of the proposed lot and proposed dwelling within the existing rural residential landscape, the landscape and visual amenity values of this portion of LCU 11 and Slope Hill will not be adversely affected, and any potential adverse effects arising from this proposal will be Very Low.

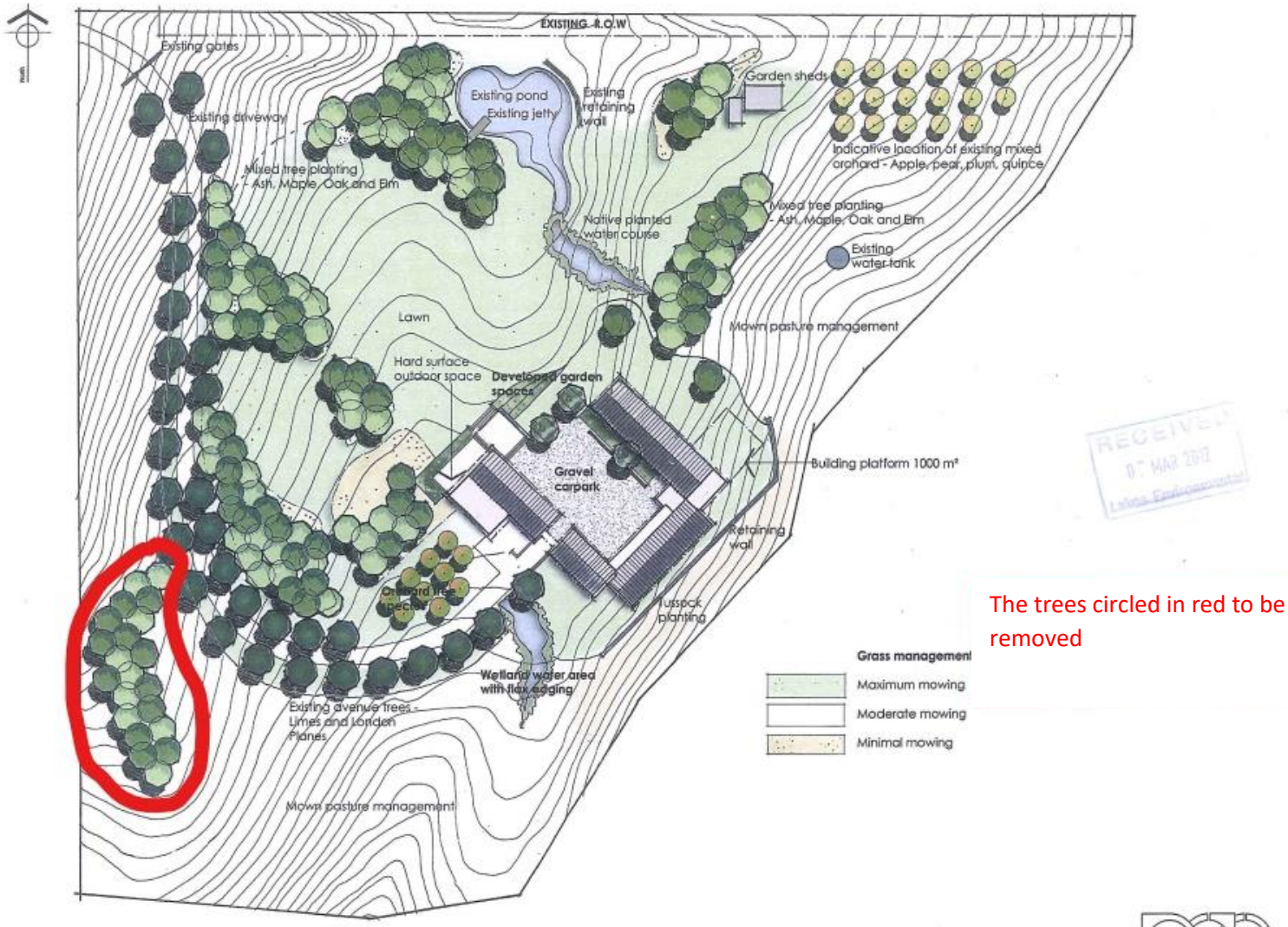
40. At the wider scale, the proposal will have Very Low potential adverse effects on the wider area of LCU 11, and the Wakatipu Basin as a whole. The landscape character and visual amenity values of the Basin and of its Landscape Character Units will continue to be maintained, and the landscape capacity of the Basin and of LCU 11 will not be exceeded.

Table 1: Scale of Effects Reference

The effects scale used in this assessment is outlined in the table below. This effects scale is based on the **New Zealand Institute of Landscape Architects (NZILA) 'Landscape Assessment and Sustainable Management 10.1' Best Practice Note**[1]. The explanations provided are based on the review of a number of scale of effects tables and the **Auckland Council 'Information requirements for the assessment of Landscape and Visual Effects' (2017)**[2]**.**

NZILA best practice scale[1] (used in this report)	**Dictionary Definition** (Collins)	**Explanation**
Negligible	• 'An amount or effect that is so small that it is not worth considering or worrying about' • 'Insignificant'	• The proposed development is barely discernible or there are no changes to the existing character, features or landscape quality[2].
Very Low effect		• The proposed development is barely discernible with little change to the existing character, features or landscape quality[2]. • Any awareness of the proposal will have a very limited effect/change to the existing landscape character and quality.
Low effect	• 'Small amount' • 'Not considered to be very important because near the bottom of a particular scale'	• A slight loss to the existing character, features or landscape quality[2]. • Any awareness of the proposal will be a minor component of/change to the wider landscape.
Moderate effect	• 'Not extreme' • 'Neither large nor small in amount or degree'	• Partial change to the existing or distinctive features of the landscape and a small reduction in the perceived amenity[2]. • The proposal may form a visible or recognisable change/new element within the wider landscape, but will not detract from the existing landscape character and quality.
High effect		• 'Noticeable change to the existing character or distinctive features of the landscape or reduction in the perceived

	• 'Something is great in amount, degree or intensity' • 'Advanced or complex'	amenity or the addition of new but uncharacteristic features and elements[2]. • The proposal may form a visible or recognisable change/ new element within the wider landscape and maybe readily noticed by the viewer, detracting from the existing landscape character and quality.
Very high effect		• Major change to the existing character, distinctive features or quality of the landscape or a significant reduction in the perceived amenity of the outlook[2]. • The proposal will form a significant or immediately apparent change to the landscape, which significantly impacts the existing landscape character and quality.
Extreme effect	• 'Something is very great in degree or intensity' • 'Severe or unusual' • 'Greatest degree possible'	• Total loss of the existing character, distinctive features or quality of the landscape resulting in a complete change to the landscape or outlook[2].



The trees circled in red to be removed

STALKER RESIDENCE - LOWER SHOTOVER ROAD
LANDSCAPE MASTERPLAN
REFERENCE 1664-SK01 SCALE - 1:500 AT A2 04 OCTOBER 2011

Dated 19/12/2022

baxter design group

LANDSCAPE MEMO

03/04/2023

To: Helen Mellsop - QLDC

From: Paddy Baxter, Landscape Architect – Baxter Design

Re: RM221142 – K Stalker – Landscape Assessment Clarification

1. This Landscape Memo responds to a request to provide further information on the following matters:
   a *The landscape assessment refers to an Appendix A that sets out design controls. This is unable to be found. As such, would it please be possible to get this sent through and also check that there aren't any other missing appendices?*
   b *There isn't any assessment against the matters in 27.9.3.3 so Helen was wondering if it was included in a table in an appendix that is missing.*
   c *Please provide a table that compares the landscape scale of effect ratings in Table 1 in the Baxter Design Landscape Assessment with those recommended in Te Tangi a te Manu, the latest NZILA guidelines for landscape assessment (refer p140 of the guidelines).*

2. (a) *The landscape assessment refers to an Appendix A that sets out design controls. This is unable to be found. As such, would it please be possible to get this sent through and also check that there aren't any other missing appendices?*

   Appendix A (Design Controls) will be attached alongside this landscape memo. There are no other missing appendices

3. (b) *There isn't any assessment against the matters in 27.9.3.3 so Helen was wondering if it was included in a table in an appendix that is missing.*

   The Landscape Assessment did not directly assess against the matters in 27.9.3.3. The below will assess the proposal against the relevant matters in 27.9.3.3, with reference to sections of the Landscape Assessment which discuss those matters.

SECTION 27.9.3.3 - SUBDIVISION DESIGN

(Part c, 27.9.3.3)
The site of the proposed lot is comprised of open, pastoral grass with very little vegetation. The proposal retains the existing rolling landform pattern by limiting earthworks and retaining the small pastoral ridge directly behind the proposed RBP.

The proposed lot boundaries are not a regular shape, instead following the natural lines of the small ridge behind the proposed RBP (to the east) and the driveway which leads to the neighbouring lot. The proposed lot boundaries are considered to be responsive to the surrounding environment.

As discussed in Section 20 and 28 of the Landscape Assessment, the proposed mitigation planting and mounding will integrate a future dwelling on the proposed RBP into the surrounding landscape which includes Slope Hill (ONF) behind. The tree species (Western Red Cedar and Dutch “Lobel” Elm) are arranged in clusters which follow a similar patterning to the rural-residential lower slopes of Slope Hill, which primarily consist of maturing clusters of exotic trees.

The Design Controls (Appendix A) will ensure ongoing compliance and retention of the landscape character and amenity values of the site and wider landscape.

(Part e, 27.9.3.3)
Section 20 and 21 of the Landscape Assessment discusses the extent to which the development maintains visual amenity from public places and neighbouring properties.

(Part g, 27.9.3.3)
The extent to which development avoids, remedies, or mitigates adverse effects on the features, elements and patterns which contribute to the value of Slope Hill (particularly from western views) is discussed throughout the Landscape Assessment, primarily between Sections 20 to 30.

(Part bb and cc, 27.9.3.3)
PDP 21.22 Landscape Schedules does not identify any historical, cultural, spiritual or archaeological features of adjacent Slope Hill. Likewise, it is unknown whether the site holds any such features. It is considered that the proposal upholds the mauri of the site and surrounding landscape.

(Part ff and gg, 27.9.3.3)
As discussed in Section 28 earthworks have been minimised and will not have adverse effects on the receiving environment.

4. *Please provide a table that compares the landscape scale of effect ratings in Table 1 in the Baxter Design Landscape Assessment with those recommended in Te Tangi a te Manu, the latest NZILA guidelines for landscape assessment (refer p140 of the guidelines).*

Below is an extract from Te Tangi a te Manu, followed by the Scale of Effects reference from the Landscape Assessment.

'Minor', 'less than minor, 'no more than minor', 'significant'

6.36 The terms 'minor', 'less than minor', and 'no more than minor' apply to particular RMA situations, namely the 'gateway' tests for non-complying activities under s104D, and tests for determining affected party status and public notification under s95.[129] Such terms are often over-used. In the interests of precision, only use them in those situations where they are relevant. It may be helpful to check whether such tests are relevant with a planner/lawyer.[130]

6.37 **'Minor adverse effects'** means some real effect, but of less than moderate magnitude and significance.[131] It means the lesser part of the scale 'minor-moderate-major'.[132] 'Minor' can be characterised as 'low' and 'mod-low' on the 7-point scale. 'Less than minor' means negligible (de-minimis) and can be characterised as 'very low'. 'More than minor' can be characterised as 'moderate' or above.[133]

very low	low	low-mod	moderate	mod-high	high	very high

less than minor	minor	more than minor	significant

6.38 However, caution is urged against an overly mechanical approach. Assessments of whether effects are minor is a reasoned judgement on significance, whereas the 7-point scale is a simple rating scale of degree. It is recommended that the nature and degree of individual effects be assessed first as would normally be undertaken. Following that, an overall professional judgement be made on whether the adverse effects are 'minor' (or less or more than) in terms of the significance of the effects in the context of the relevant test. Like all professional judgements, explain with reasons.

6.39 Likewise, the term '**significant adverse effects**' applies to particular RMA situations, namely as a threshold for the requirement to consider alternative sites, routes, and methods for Notices of Requirement under RMA s171(1)(b), the requirements to consider alternatives in AEEs under s6(1)(a) of the 4th Schedule. It may also be relevant to tests under other statutory documents such as for considering effects on natural character of the coastal environment under the NZ Coastal Policy Statement (NZCPS) Policy 13 (1)(b) and 15(b).

Table 1: Scale of Effects Reference

The effects scale used in this assessment is outlined in the table below. This effects scale is based on the **New Zealand Institute of Landscape Architects (NZILA) 'Landscape Assessment and Sustainable Management 10.1' Best Practice Note**[1]. The explanations provided are based on the review of a number of scale of effects tables and the **Auckland Council 'Information requirements for the assessment of Landscape and Visual Effects' (2017)**[2]**.**

NZILA best practice scale[1] (used in this report)	**Dictionary Definition** (Collins)	**Explanation**
Negligible		

	• 'An amount or effect that is so small that it is not worth considering or worrying about' • 'Insignificant'	• The proposed development is barely discernible or there are no changes to the existing character, features or landscape quality[2].
Very Low effect		• The proposed development is barely discernible with little change to the existing character, features or landscape quality[2]. • Any awareness of the proposal will have a very limited effect/change to the existing landscape character and quality.
Low effect	• 'Small amount' • 'Not considered to be very important because near the bottom of a particular scale'	• A slight loss to the existing character, features or landscape quality[2]. • Any awareness of the proposal will be a minor component of/change to the wider landscape.
Moderate effect	• 'Not extreme' • 'Neither large nor small in amount or degree'	• Partial change to the existing or distinctive features of the landscape and a small reduction in the perceived amenity[2]. • The proposal may form a visible or recognisable change/new element within the wider landscape, but will not detract from the existing landscape character and quality.
High effect	• 'Something is great in amount, degree or intensity' • 'Advanced or complex'	• 'Noticeable change to the existing character or distinctive features of the landscape or reduction in the perceived amenity or the addition of new but uncharacteristic features and elements[2]. • The proposal may form a visible or recognisable change/ new element within the wider landscape and maybe readily noticed by the viewer, detracting from the existing landscape character and quality.
Very high effect		• Major change to the existing character, distinctive features or quality of the landscape or a significant reduction in the perceived amenity of the outlook[2]. • The proposal will form a significant or immediately apparent change to the landscape, which significantly impacts the existing landscape character and quality.
Extreme effect	• 'Something is very great in degree or intensity' • 'Severe or unusual' • 'Greatest degree possible'	• Total loss of the existing character, distinctive features or quality of the landscape resulting in a complete change to the landscape or outlook[2].

Stalker – 208A Lower Shotover Road
Design Controls
April 2023

A. PURPOSE OF THE DESIGN CONTROLS

These design controls will set the character of the built form and designed landscape within the proposed Lot. The intention is to ensure a high quality architectural form, with materials and colours that are sympathetic to the landscape, minimise potential adverse visual effects whilst promoting design integration into the existing characteristics of the site.

B. ARCHITECTURAL DESIGN CONTROLS

B1. KEY OBJECTIVES

The following objectives of the architectural controls seek to achieve a high-quality architectural design complementary to the character of the site and surrounding built forms ensuring that all dwellings are:

- To continue the rural lifestyle character of the surrounding area into this lot with form and materiality,
- To enable the proposed development to be absorbed into the wider landscapes texture and pattern,
- To be complimentary in form, materiality, texture, and colour with the hue and saturation found naturally in the surrounding landscape.

The architectural design shall adhere to the following controls:

B2. SITE COVERAGE

Objectives:

- To ensure rural character is maintained by promoting an appropriate scale of open space in comparison to dwelling size.

Controls:

(a) The dwelling, garage and vehicle courtyard shall be located within the building platforms
(b) The dwelling shall not exceed a maximum site coverage of 50% of the building platform.

B3. BUILDING FORM, ROOF AND HEIGHT

Objectives:

- To promote a consistent design approach for the dwelling and garaging.

Controls:

(a) Two tiers of roof form controls include separate controls for gabled forms and monopitch ('flat') roof forms
(b) Gabled forms: gabled roof forms shall be kept in simple forms with a pitch between 27.5-35-degree pitch with horizontal roof connections between gable forms. For gabled forms, the building height shall not exceed 5.5m from slab to top of roof (excluding chimneys), Hip roofs are not permitted.
(c) Monopitch ('flat') roof forms; Mono pitch roof forms are permitted up to 10-degree pitch roofs. For monopitch buildings the height shall not exceed 4m from slab to top of roof (excluding chimneys),
(d) Roof colours are to have a LRV of less than 20%. Roof materials shall be restricted to one material from the following materials only:
(e) Steel tray cladding, timber shingles left to weather or natural stain, corrugated iron, weathered steel (or corten) or concrete with a reflectivity value not to exceed 20%.
(f) No deck, porch, veranda or similar exterior-built surface, which is part of the building shall extend beyond 5m from the building. Note: verandah/porch etc to be included in the site coverage.
(g) Materiality and colour of deck, porch, veranda, or similar exterior-built surface, to be sympathetic to the surrounding colour palette of the area.

B4. WINDOW AND GLAZING

Objectives:

- To control glazing percentage of each elevation and mitigate potential reflectivity.

Controls:

(a) Glazing on the west elevations shall not exceed 70% of the wall area on each elevation.
(b) All glazing shall be non-reflective.

B5. EXTERNAL WALL CLADDING

Objectives:

- To ensure an appropriate range of materials, which complement the natural characteristics of the environment and are recessive within the landscape.

Controls:

(a) All materials shall be resilient and durable in nature. External wall materials shall be limited to two materials on any single elevation, with an LRV of less than 30%. Exterior wall materials shall be restricted to the following materials only:

- Natural timber cladding, left to weather in dark browns or greys, in either 'weatherboard', 'shiplap', 'tongue and groove', or vertical 'board and batten' styles.
- Stained timber cladding,
- Steel tray cladding
- Locally sourced schist stone, laid horizontally, 'mudded' or dry stacked
- Profiled metal: standing seam profile in dark colours, or pre-weathered zinc

- Concrete

(b) All window and door joinery, gutters and downpipes shall be coloured to match the roof and exterior wall cladding

C. LANDSCAPE DESIGN CONTROLS

C1. KEY OBJECTIVES

The objectives of the following landscape controls are to ensure that the designed landscape will:

- Produce a contiguous design of planting across all lots, fitting back into the natural character of the area,

C2. FENCING AND ENTRY FEATURES

Controls:

(a) All boundary fencing and internal fencing shall be restricted to 1m high post and wire, and/or post and rail fencing only, with rabbit proofing mesh where required.

C3. EARTHWORKS, DRIVEWAY AND PARKING

Objectives:

- To ensure surface materials are contiguous and complimentary with the surrounding landscape.

Controls:

(a) The driveways and vehicle courtyard be finished in compacted driveway specified gravels, exposed aggregate, asphalt, or similar.
(b) Earthworks for landscape shaping to be kept to a minimum and to follow the natural topographical pattern of the site and surrounds as best as possible.

C4. EXTERNAL LIGHTING

Objectives:

- Lighting will be used for the purpose of illuminating the dwelling entries, driveways and outdoor living areas only.

Controls:

(a) Any external lighting shall be restricted to down lighting only and no higher than 1.2m.
(b) Lighting should not create any light spill and shall be low lux level. Light sources are to be LED, incandescent, halogen or other 'white light'. Sodium vapour or other coloured lighting is not allowed.

LANDSCAPE ASSESSMENT ADDENDUM

22/08/2023

In response to: Landscape Assessment Peer Review, Helen Mellsop, 17 April 2023

Application Reference: RM221142 – K Stalker

INTRODUCTION

1. This Landscape Assessment Addendum responds to the Landscape Assessment Peer Review undertaken by Helen Mellsop, 17 April 2023, regarding RM221142 (undertake a two-lot subdivision on Lot 1 DP 304273 and change Condition 2 of RM950475 as varied by RM120150 in respect of landscaping).

2. This addendum addresses the following matters raised in the Peer Review:

    - The proposed lot sizes with regard to the pattern and density of rural living in the surrounding landscape and potential adverse effects on landscape character.
    - The proposed mitigation planting and potential adverse effects on visual amenity values of LCU 11 and the Slope Hill ONF.

3. The following Attachments are included in this addendum, which have been amended since the original Landscape Assessment was undertaken (dated 10 Jan 2023):

Attachment A1:	Context and Photo Location Plan	4325-SK18
Attachment B1:	Lot Plan	4325-SK19
Attachment C1:	Site Plan	4325-SK20
Attachment C2:	Lot Size Comparison	4325-SK17
Attachment D:	Landscape Assessment Photo 1	4325-SK07
Attachment E:	Landscape Assessment Photo 2	4325-SK08
Attachment F:	Landscape Assessment Photo 3	4325-SK09
Attachment G:	Landscape Assessment Photo 4 + 5	4325-SK13
Attachment H:	Landscape Assessment Photo 6 + 7	4325-SK14
Attachment I:	Site Panorama	4325-SK12

PROPOSED LOT SIZES

4. This addendum agrees that the original proposal (10 Jan 2023) *would "add a residential lot substantially smaller than any other lot within the area except No. 150 (0.30ha)."* [1]

5. In response to the Peer Review, the proposed lot size of the proposed subdivision of Lot 1 DP 304273 has been amended from 0.33ha to 1.10 ha (**refer Attachment B1 and C1**). The lot containing the existing dwelling will be 2.23ha.

6. It is acknowledged that the proposed lots will still be relatively small when compared to some immediate surrounding lots on the western slopes of Slope Hill, however, as shown in **Attachment C2,** lots of this size are not uncommon in this landscape.

7. Similar sized rural-residential lots (to what is being proposed) sit comfortably within the rural living landscape in this portion of LCU 11 and are visually absorbed into the landscape by the established patterning of mature vegetation.

8. In regards to the location of the proposed development, the scale and form of the proposed development is consistent with the surrounding landscape character and potential adverse effects will be low.

9. In regards to open space, the Peer Review says the following:

   "Relies on the adjacent lots and the Slope Hill ONF to provide an appropriate balance of open space to domestication"

   "Lack of an appropriate balance between domestication and retained open space."

   "I do not consider the allotment sizes maintain a sense of spaciousness, as neither of the lots are of sufficient size to include appreciable open space."

10. In response to the above, the plan has been amended. A curtilage area is now shown on the proposed lot. Domestic activity such as mown lawns, amenity gardens, garden structures, paved areas, play equipment, clothes lines and external lighting shall be contained within the curtilage area.

11. All areas outside the curtilage area shall be maintained in pastoral grass by way of mowing and/or grazing. This area of open space to be retained totals 7570m², being the area surrounding the existing driveway and the area which includes the small ridge to the east of the proposed RBP.

12. When considering the existing pattern of vegetation, residential dwellings and open space in the surrounding landscape (as pictured in **Attachment B1**), the balance between domestication and open space of the proposed development is consistent with that of the surrounding landscape.

[1] Landscape Assessment Peer Review, Helen Mellsop, para. 9

PROPOSED MITIGATION PLANTING

13. The Peer Review states that the proposed mitigation planting *"would be consistent with the identified attributes and visual amenity values of LCU 11,"* however, in the long-term, the Peer Review states that "*there is some potential for proposed tree planting on Lot 2 to further obscure views of the Slope Hill ONF from viewpoints to the west," and "as they mature, proposed trees would reduce the extent of pastoral openness experienced in western views towards the ONF, with a low-moderate adverse effect on this visual amenity value."*

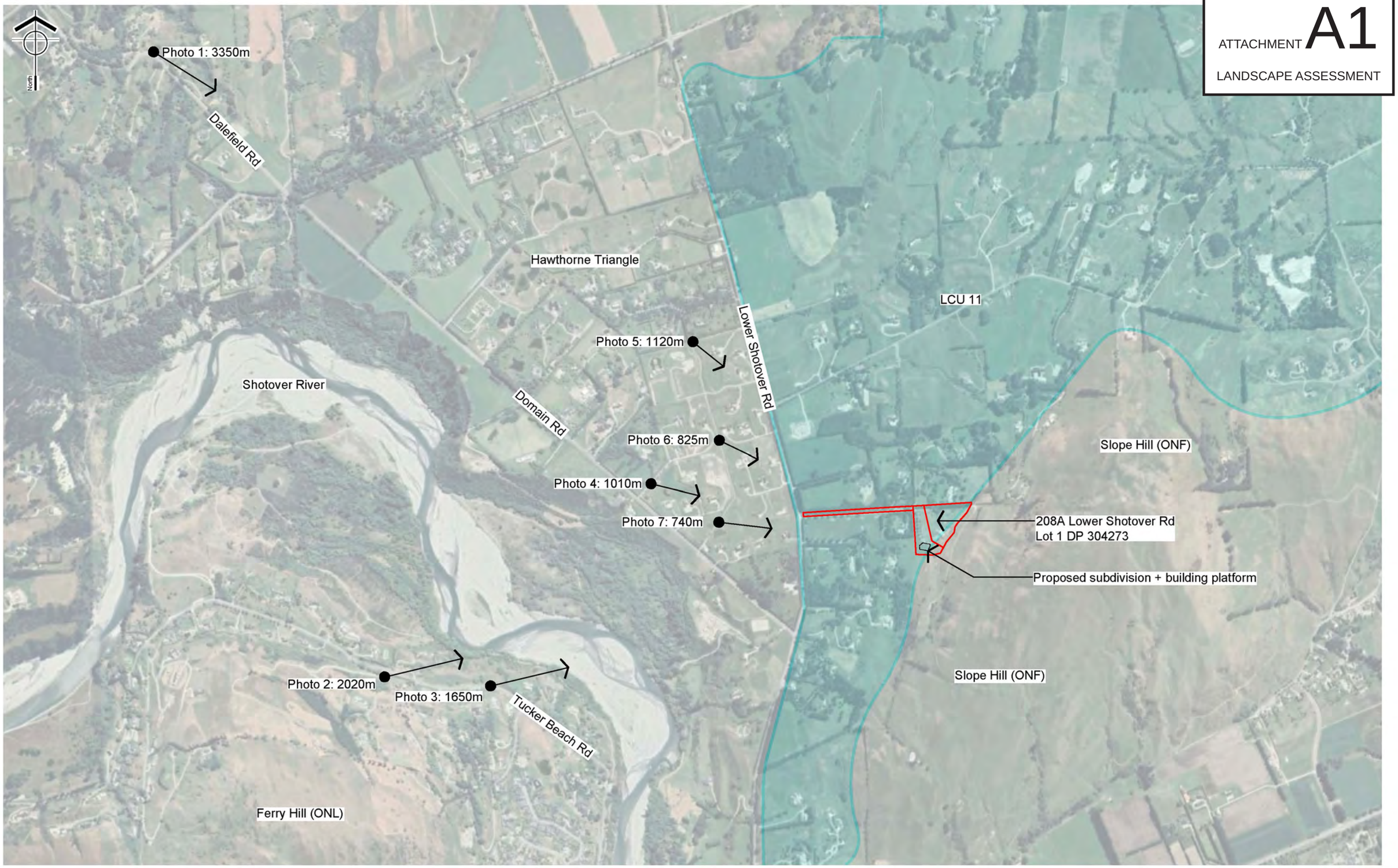
14. As evident in **Attachments D to H,** the proposed development, when viewed from all wider public views, will be located within the existing tree line and not above it. When the proposed trees reach maturity, that planting will be a less than minor component of this pattern of vegetation and will not impede any views of Slope Hill, with Slope Hill remaining visually dominant in the background.

15. This addendum disagrees with the Peer Review regarding potential adverse effects on the visual amenity values of the Slope Hill ONF and considers any potential adverse effects on the ONF to be Very Low.

16. Despite the above, the proposed planting scheme has been amended to ease concerns that the Council may have. The total number of trees has been reduced from 28 to 20, with the number of Western Red Cedar reduced from 15 to 8, and the number of Lobel Elms reduced from 13 to 12.

ATTACHMENT **A1**

LANDSCAPE ASSESSMENT



baxter design

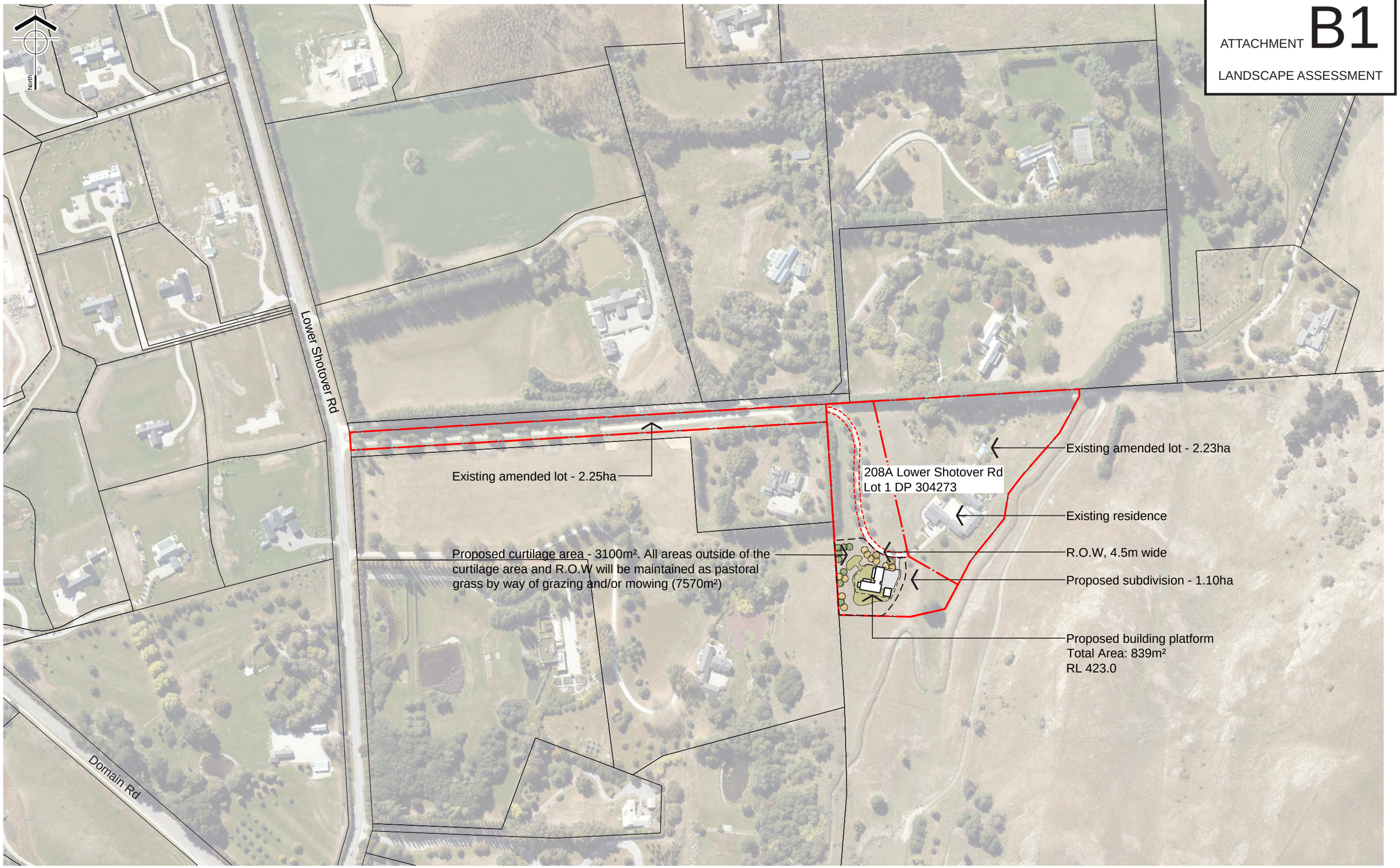
REFERENCE **4325-SK18** - NOT TO SCALE - **22 Aug 2023**
DRAFT - NOT A WORKING DRAWING - NOT FOR CONSTRUCTION
J:\4325 - kaye stalker lower shotover road\cad\xref - 4325 - masterplan.dwg - Photo Location Plan

CONTEXT + PHOTO LOCATION PLAN

KAYE STALKER - LOWER SHOTOVER ROAD

ATTACHMENT **B1**

LANDSCAPE ASSESSMENT



baxter design

0 15 30 75m

SCALE = 1:1500 AT A1

REFERENCE **4325-SK19** - SCALE = 1:1500 AT A1 - 1:3000 AT A3 - **21 Aug 2023**

DRAFT - NOT A WORKING DRAWING - NOT FOR CONSTRUCTION

j:\4325 - kaye stalker lower shotover road\cad\xref - 4325 - masterplan.dwg - Lot Plan

LOT PLAN

KAYE STALKER - LOWER SHOTOVER ROAD

ATTACHMENT **C1**

LANDSCAPE ASSESSMENT

North

Proposed R.O.W to existing residence

New lot entry from existing driveway

Building platform, RL 423.0, 839m²

Indicative house, approximately 300m²

Proposed lot boundary, fenced with post and 7 wire

1m designed contours

Curtilage area - 3100m²
All areas outside of the curtilage area will be maintained as pastoral grass by way of grazing and/or mowing

Lobel Elm ("Ulmus Lobel") x 12

Western Red Cedar (Thuja plicata) x8

418

420

422

423

424

426

428

0 1.5 3 7.5m
SCALE = 1:150 AT A1

REFERENCE **4325-SK20** - SCALE = 1:150 AT A1 - 1:300 AT A3 - **21 Aug 2023**
DRAFT - NOT A WORKING DRAWING - NOT FOR CONSTRUCTION
j:\4325 - kaye stalker lower shotover road\cad\xref - 4325 - masterplan.dwg - Site Plan

baxter design

SITE PLAN
KAYE STALKER - LOWER SHOTOVER ROAD

ATTACHMENT C2

LANDSCAPE ASSESSMENT

North

14.31ha
4.40ha
4.53ha
4.28ha
4.01ha
5.04ha
2.35ha
0.62ha
0.79ha
0.66ha
0.82ha
1.19ha
3.47ha
2.78ha
7.96ha
10.8ha
3.55ha
3.46ha
1.03ha
1.56ha
8.46ha
0.80ha
4.06ha
0.93ha
1.66ha
17.89ha
4.73ha
4.12ha
4.31ha
4.14ha
4.33ha
4.04ha
4.05ha
1.40ha
1.16ha
2.23ha
1.10ha
Proposed subdivision of Lot 1 DP 304273
(Existing Lot 1 DP 304273 = 3.33ha)
6.14ha
4.01ha
0.86ha
4.01ha
4.15ha
0.80ha
3.88ha
0.30ha
6.53ha

LEGEND:

- < 2.5ha
- 2.5-5ha
- > 5ha

baxter design

0 50 100 250m
SCALE = 1:5000 AT A1

REFERENCE : **4325-SK17** - SCALE = 1:10000 AT A3 - **20 JUL 2023**

DRAFT - NOT A WORKING DRAWING - NOT FOR CONSTRUCTION

LOT SIZE COMPARISON

KAYE STALKER - LOWER SHOTOVER ROAD

ATTACHMENT D

LANDSCAPE ASSESSMENT

PHOTO: BAXTER DESIGN
REFERENCE: **4325-SK07** - LANDSCAPE ASSESMENT PHOTO 1
IMAGE: PANORAMIC, MULTIPLE IMAGE STITCH,
50MM FOCAL LENGTH
DATE: **20 OCT 2022**
VIEWING DISTANCE: **APPROX 3350M** FROM SITE

ATTACHMENT E

LANDSCAPE ASSESSMENT

PHOTO: BAXTER DESIGN
REFERENCE: **4325-SK08** - LANDSCAPE ASSESMENT PHOTO 2
IMAGE: PANORAMIC, MULTIPLE IMAGE STITCH,
50MM FOCAL LENGTH
DATE: **20 OCT 2022**
VIEWING DISTANCE: **APPROX 1980M** FROM SITE

ATTACHMENT F

LANDSCAPE ASSESSMENT

PHOTO: BAXTER DESIGN
REFERENCE: **4325-SK09** - LANDSCAPE ASSESMENT PHOTO 3
IMAGE: PANORAMIC, MULTIPLE IMAGE STITCH,
50MM FOCAL LENGTH
DATE: **20 OCT 2022**
VIEWING DISTANCE: **APPROX 1650M** FROM SITE

baxter design

REFERENCE : **4325-SK09** - **20 OCT 2022**
DRAFT - NOT A WORKING DRAWING - NOT FOR CONSTRUCTION

LANDSCAPE ASSESSMENT PHOTO 3
KAYE STALKER - LOWER SHOTOVER ROAD

ATTACHMENT G

LANDSCAPE ASSESSMENT

PHOTO 4: BAXTER DESIGN
REFERENCE: **4325-SK13** - LANDSCAPE ASSESMENT PHOTO 4 + 5
IMAGE: PANORAMIC, MULTIPLE IMAGE STITCH,
50MM FOCAL LENGTH
DATE: **25 OCT 2022**
VIEWING DISTANCE: **APPROX 1010M** FROM SITE

PHOTO 5: BAXTER DESIGN
REFERENCE: **4325-SK14** - LANDSCAPE ASSESMENT PHOTO 4 + 5
IMAGE: PANORAMIC, MULTIPLE IMAGE STITCH,
50MM FOCAL LENGTH
DATE: **25 OCT 2022**
VIEWING DISTANCE: **APPROX 1120M** FROM SITE

baxter design

REFERENCE : **4325-SK13** - **25 OCT 2022**
DRAFT - NOT A WORKING DRAWING - NOT FOR CONSTRUCTION

LANDSCAPE ASSESSMENT PHOTO 4 + 5
KAYE STALKER - LOWER SHOTOVER ROAD

ATTACHMENT H

LANDSCAPE ASSESSMENT

PHOTO 6: BAXTER DESIGN
REFERENCE: **4325-SK13** - LANDSCAPE ASSESMENT PHOTO 6 + 7
IMAGE: PANORAMIC, MULTIPLE IMAGE STITCH,
50MM FOCAL LENGTH
DATE: **25 OCT 2022**
VIEWING DISTANCE: **APPROX 825M** FROM SITE

PHOTO 7: BAXTER DESIGN
REFERENCE: **4325-SK14** - LANDSCAPE ASSESMENT PHOTO 4 + 5
IMAGE: PANORAMIC, MULTIPLE IMAGE STITCH,
50MM FOCAL LENGTH
DATE: **25 OCT 2022**
VIEWING DISTANCE: **APPROX 740M** FROM SITE

baxter design

REFERENCE : **4325-SK14** - **25 OCT 2022**
DRAFT - NOT A WORKING DRAWING - NOT FOR CONSTRUCTION

LANDSCAPE ASSESSMENT PHOTO 6 + 7
KAYE STALKER - LOWER SHOTOVER ROAD

ATTACHMENT

LANDSCAPE ASSESSMENT

PHOTOGRAPH FROM PROPOSED BUILDING PLATFORM, LOOKING WEST

baxter design

REFERENCE : **4325-SK12 - 20 OCT 2022**

DRAFT - NOT A WORKING DRAWING - NOT FOR CONSTRUCTION

SITE PANORAMA

KAYE STALKER - LOWER SHOTOVER ROAD

SERVICES ASSESSMENT

PROPOSED SUBDIVISION OF LOT 1 DP 304273, 208A LOWER SHOTOVER ROAD For P. EDMOND & K. STALKER

CLARK FORTUNE MCDONALD & ASSOCIATES
REGISTERED LAND SURVEYORS, LAND DEVELOPMENT & PLANNING CONSULTANTS

1 INTRODUCTION

Clark Fortune McDonald & Associates (CFM) has been engaged by P. Edmond & K. Stalker to assess servicing for the proposed subdivision comprising 2 rural living sites. The analysis considers the servicing options available to provide for the proposed demand.

The subdivision comprises one site containing an existing residential dwelling. The property is legally described as Lot1 1 D.P. 304273. The total area of the subject sites comprises approx. 3.33 ha. The site is located at 208A Lower Shotover Road.

This report is preliminary for resource consent purposes. Further information and detailed engineering design will be required should development proceed.

The report considers servicing demands and capacity based on proposed residential activities.

2 SCOPE OF WORK

The scope of work includes examination of existing QLDC as-built records, confirmation of capacity of existing services to determine the adequacy of the existing infrastructure, and recommendation of servicing options.

3 DESIGN STANDARDS

Site subdivision standards include, but are not limited to, the following:

- QLDC Land Subdivision and Subdivision Code of Practice adopted 8/10/2020.
- NZS4404:2010

- Drinking-Water Standards for New Zealand 2005 (revised 2008).
- NZS PAS 4509:2008, New Zealand Fire Service Fire-fighting Water Supplies Code of Practice.
- Water for Otago, Otago Regional Council regional water plan.
- Document for New Zealand Building Code Surface Water - Clause E1 / Verification Method 1.
- On-site domestic wastewater management AS/NZS 1547:2012

4 PROPOSED SUBDIVISION CONCEPT

The proposed subdivision will result in one additional rural living site. A subdivision scheme plan is attached to the application showing the layout of the proposed allotments.

The following report examines the feasibility of servicing the additional allotments.

5 ACCESS

The existing property is serviced off Lower Shotover Road. The crossing with Lower Shotover Road is located at the apex of a small 10° bend in the road.

Lower Shotover Road has a flat and straight alignment in in both directions offering excellent sight distances, with one traffic lane in each direction.

The road has a typical rural cross-section, with swales and a shoulder (rather than footpaths and kerbs). The seal is in the order of 6.2m wide, and the road is subject to an 80km/h speed limit.

Lower Shotover Road is an Arterial Road under the District Plan roading hierarchy. Because of its rural location, there are numerous lots on either side of the road that gain access to it by way of a private driveway. Lot sizes are sufficiently large that it is not expected that any vehicles would be required to reverse onto the road. Vehicles will drive off

and onto the road in a forward direction. These crossings are constructed as simple access intersections with little (if any) widening of the seal of Lower Shotover Road.

According to the MobileRoad website, Lower Shotover Road carries around 2,800 vehicles per day (two-way). A road typically carries around 10% of its daily flow in the peak hours, meaning that it could be expected to carry 280 vehicles (two-way) per hour at the busiest of times.

The existing vehicle crossing is of asphalt construction up to the property boundary and is in general accordance with Diagram 8 of the District Plan. Photograph of the crossing below.

At the adjoining property boundary to the north, another metalled vehicle crossing, and letter box/rubbish bin collection layby exist. The two crossings are 15m apart with a conjoined formation in the centre making for additional area for vehicles pass if queued at the crossing point.

From the legal road boundary, the existing dwelling and proposed dwelling are accessed via a ‘leg-in’ access that is a single lane with metal formation.
The lane also services two other properties which have Right of Way over the leg in, an existing dwelling at 208 Lower Shotover Road and a consented but not yet constructed dwelling on the adjoining site 208C Lower Shotover Road.

With the addition of a new lot, total number of users of the access would be 4. Based on 8 vpd per user, total movements anticipated would be 32.

Under rule 29.3, this volume of traffic is right on the threshold between a Diagram 8 & Diagram 9 vehicle crossing. Given that the intersection is not anticipated to be used by frequent heavy vehicles such as refuse collection trucks, that there is a low crash rate on this road and the likelihood of conflict from vehicles entering and exiting, it is concluded that a Diagram 8 crossing is sufficient.

To service 4 dwellings, the access is required to comply with category E1 of the QLDC CoP.

To meet this design standard, the shared access would need the addition of passing bays. As the access is straight with good forward visibility, these would normally be spaced at 100m intervals. However, as the berms adjoining are gentle and trafficable, passing is possible currently without formed passing bays. Also as the existing leg in has an avenue of trees lining the access, it would not be desirable to remove the trees for the purposes of vehicle passing bays. This would remove some of the rural amenity currently afforded by the accessway.

Instead, it is considered that the locations of possible conflict where passing would be desirable would be located where the driveways of the adjoining two properties intersect. Localised widening at these locations would enable safe passing of vehicles for the accessway users.

The gradient of the access does not exceed 15% so is compliant with the requirements of the code. The shared Right or Way access is currently formed at 2.5m and is unsealed. To meet the Code of Practice, requirement this would need to be upgraded to a sealed surface including a 0.5m sealed shoulder.

6 EARTHWORKS

The new lots will be serviced by an existing accessway so no earthworks are required for access.

Earthworks are proposed to create a building platform on the proposed site.

The following earthworks quantities are anticipated.

Area of earthworks = 3,005m²
Topsoil stripping = 600m³
Volume of cut = 1,000m³
Volume of fill = 2,500m³
Import of fill = 1,500m³
Max height of cut = 2.6m
Max height of fill = 3.7m

Approx. 2,500m³ of fill material is to be imported to site.

Fill is proposed to be placed within the buildable areas of the allotment, the fill will therefore need to be engineered and certified in accordance with NZS4431:2022.

No retaining is proposed.

All earthworks are to be carried out in accordance with an approved Environmental Management Plan in accordance with QLDC guidelines.

All earthworks are to be carried out in accordance with the recommendations of the Geotago report dated 14 December 2022 ref: GL22-059.1

7 WASTEWATER

7.1 Existing reticulation

The property is located outside the QLDC reticulation scheme boundaries and as such there is no Council owned wastewater assets in the immediate area. The existing residential dwellings are serviced with on-site systems as is consistent with existing development in Lower Shotover Road.

Therefore, given the level of engineering required to connect the rural dwellings to QLDC municipal network, connecting to existing infrastructure that has not designed for the demand for this site is not considered to be an efficient option at this time.

Should a communal system for the newly zoned Wakatipu Basin Lifestyle Precinct in this area be considered, with a larger number of total dwellings, economy in scale may make

connection to a municipal system economic. Given the nature of the housing and its rural density, its likely a municipal pressure sewer network may provide for the best whole of life outcome.

7.2 Proposed residential demand

Each of the proposed new sites is intended to accommodate a standard residential dwelling. Under QLDC COP residential demand would be 250 litres per person per day based on 3 people per dwelling.

7.3 On Site Wastewater Disposal

Australian/New Zealand Standard 1547:2012 was published superseding the previous standard from 2000. The standard was updated to reflect a risk-management approach to wastewater treatment. It is noted however that much of the methodology is unchanged from the earlier standard.

Geotago have completed an onsite wastewater site and soils assessment and concluded that on-site disposal is feasible.

7.4 Conclusion and recommendations

Based on the Geotago investigations that the site is of a suitable size and geology it is concluded that onsite wastewater disposal is the most feasible method of disposing of wastewater generated from proposed dwellings.

An appropriate location on site can be identified as being suitable for the disposal of wastewater.
OSWWD technology has enabled packaged proprietary tertiary treatment systems to be readily available and are considered to be a good option.

Detailed design is required to be completed as part of the Building Consent process. The new standard requires a robust design process. The necessary guidance and comprehensive application forms are available on QLDC website.
https://www.qldc.govt.nz/planning/building-consents/application-forms/onsite-wastewater-disposal-systems/
Provided the correct design, approval, construction and monitoring processes are followed for the establishment and operation of the wastewater disposal system there will be no adverse effects arising from the disposal of wastewater to ground from the future dwelling.

8 STORMWATER

8.1 Existing Stormwater Infrastructure

There is currently no reticulated stormwater infrastructure servicing the site.

The subject site geology is described in the Geotago report.

8.2 Stormwater Catchments

The site is sitting on the lower part of Slopehill. To the east the land rises up on the western flanks of the Slopehill foothills.

The proposed building site sits just to the east of the low schist ridge which is the top of the catchment. There is a flow path heading north on the eastern side of the ridge that will contain any flows from Slopehill. The ridge acts as a natural barrier from any upslope flows.

The ridge (brown line) and flow path (blue arrows) are illustrated in the image below.

It is noted that the Arrow Irrigation Race traverses the schist ridge with a bend in the race near the southern boundary of the property. The race is excavated in competent schist so risk of race failure in that location appears low. If the race were to overtop in extreme flood event any water that were to run overland towards the proposed dwelling would be diverted due to the filled and elevated finished level of the new allotment.

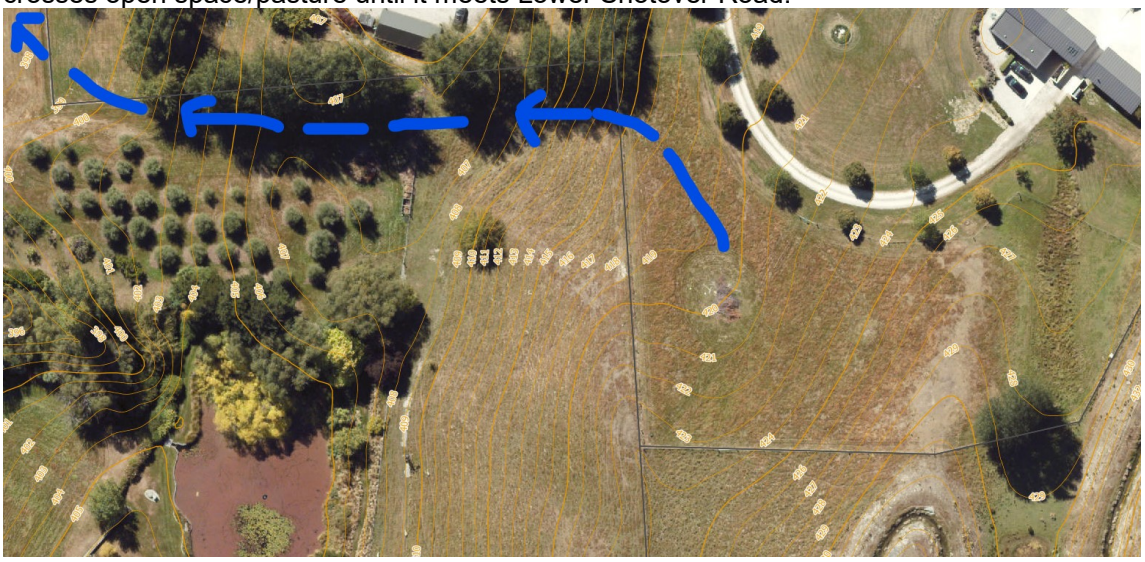
8.3 Onsite treatment and disposal

For any future dwelling, stormwater design would be completed in accordance with NZ Building Code E1 – Surface water and/or section 4 of QLDC COP 2020.

Stormwater run-off from new impervious areas would be disposed to ground. The design shall be undertaken in accordance with Verified Method E1/VM1 and/or QLDC COP. This would take the form of a soakpit or similar on-site storage/soakage system. Given the size,

geology and topography of the proposed lot, location and size of soakage areas are not constrained allowing for flexibility of design options.
Section 8 of the Geotago report covers this in more detail.

Secondary overflow will be to the west towards the Shotover River. The natural flow path crosses open space/pasture until it meets Lower Shotover Road.



Detailed design is required to be supplied with the building consent documentation and shall be completed by a suitably qualified person.

9 WATER RETICULATION

9.1 Water supply design

To assess the demand and supply requirements for the proposed development the following aspects have been considered:

- Water demands
- Water availability
- Existing infrastructure
- Storage requirements
- Irrigation requirements

9.2 Design flows

Demand based on the anticipated activities for the potential development have been determined in accordance with the subdivision standards:

Refer QLDC code of practice 6.3.5.6.

No of residential units:	2.
Average daily demand:	700 l / person / day.
Occupancy:	3.0 person / du.

Peak Day factor:	6.6.
Average Daily demand (ADD):	***4.2 m^3 / day.***
Peak day demand:	***0.3 l/ sec.***

One significant consideration for the Average Daily Demand for the QLDC code of practice is irrigation demand. Irrigation for private use varies greatly and is generally uncontrolled. The Irrigation allowance in the demand is 400l/person/day.

It is noted that the Arrow Irrigation Company network has existing infrastructure on the adjoining land and would be able to provide suitable irrigation water to the lifestyle properties.

9.3 Required Firefighting demand

The design of the new water infrastructure will need to meet the requirements of SNZ PAS 4509 – NZ Fire Service Firefighting Water Supplies Code of Practice.

9.3.1 Residential fire fighting demand – reticulated supply - non sprinklered

Water supply classification:	FW2.
Required water flow within 135m:	12.5 l / sec
Additional water flow within 270m:	12.5 l / sec.
Max No. of hydrants to provide flow:	2.
Minimum pressure	100kPa.

Further, in the Wakatipu Basin Rural Amenity Zone PDP Rule 24.5.19 requires:

New buildings for residential activities where there is no reticulated water supply, or any reticulated water supply is not sufficient for firefighting must have one of the following:

Either a sprinkler system installed and plumbed with a maintained static water storage supply of at least 7,000 litres available to the system, or water supply and access for firefighting that meets the following requirements:

a). Water storage of at least 45,000 litres shall be maintained (excluding potable water storage for domestic use) with an outlet connection point that can provide 1500L/min (25 L/s) and any necessary couplings;

b). A hardstand area with a minimum width of 4.5m and length of 11m located within 6m of the firefighting water supply connection point and capable of supporting a 20 tonne fire service vehicle;

9.4 Existing Infrastructure

The subject property is currently serviced by a private water supply scheme known as the Glenpanel water scheme. In early 2022 the scheme was connected to QLDC water supply due to elevated levels of arsenic in the existing bore. The scheme reticulation is privately owned and maintained, and water is supplied from the QLDC Shotover Country network connected at the Stalker Road roundabout.

Approval was provided for the connection of the existing and consented users of the scheme on the grounds of public health.

Details of this connection are attached to this report.

9.5 Concept Design

There are considered to be 2 feasible options to service the proposed development.

First option is to utilise the existing private scheme that already services the subject property.

Both the Glenpanel water scheme manager (Mr. Kristan Stalker) and QLDC P & I (Mr. Richard Powell) have been contacted to seek approval for the connection of the proposed additional dwelling to the scheme. At the time of writing this report, Glenpanel Water advised this would likely be a decision for QLDC P & I dept. To date we have yet to receive a response from QLDC P& I.

It has not therefore been determined whether there is sufficient capacity in QLDC network or within the Glenpanel reticulation for the added demand. Given the relatively low demand however it is not anticipated there will any physical restraint to the supply of water and would therefore be a feasible option.

It is noted that the subject property is outside the current QLDC water supply scheme boundary.

The alternative option for water servicing would be to extend Hawthorn water supply scheme to the site.

Peter McLeod, director of the Hawthorn scheme has been approached about a Hawthorn Water connection.

Peter confirms that water is available, and Warwick Goldsmith has shares in the scheme that can be purchased.

To connect, Hawthorn Water have a 50mm line that crosses Lower Shotover Road about 130m north of this site. (refer picture below and LTO attached)

From the connection point to the proposed platform is approx. 650m. The proposed platform is also at a higher elevation than the Hawthorn header tank so a pump would be needed to boost the water up to the proposed platform site and storage tanks.

A further LTO would be needed for the ~130m of pipe extension in Lower Shotover Road from QLDC. We'd anticipate Hawthorn Water would hold the license.

Given that each future allotment would contain water storage tanks, the storage tanks will provide for firefighting and domestic buffer storage and be installed at the time of dwelling construction.

Service connections would be made to the new lot in accordance with the Code of Practice.

Internal reticulation would be sized accordingly but is anticipated that mains of 50mmØ would be required and laterals of 20mmØ.

Any new internal irrigation reticulation with water sourced from the Arrow Irrigation system can also be provided to the allotments.

As the sites will have buffer storage and separate irrigation supply the demand figures may be recalculated to greatly reduce the demand and eliminate the peaks:

If connecting to Glenpanel, it may be considered beneficial for QLDC to opt for a restricted system should there be wider network capacity constraints.

Depending on the water supply chosen, new reticulation constructed for this subdivision would likely be private.

9.6 Required upgrades

No upgrades to the existing private systems or Arrow Irrigation system are anticipated.

If a QLDC scheme boundary is extended to cover this subdivision, or approval to connect is granted, any effects on the QLDC's infrastructure will be mitigated by the imposition of

headworks fees at the time of connection to Council's service. The development when connecting to QLDC network would be levied the figures stipulated in the 2021 Development Contribution policy. The proposed figure to be levied is $4,454 per lot.

10 POWER, TELECOMMUNICATIONS

Aurora Energy have high voltage network within the property. The network could supply suitable underground electrical supply to additional lots in the proposed subdivision. Below is a screen shot of Aurora's GIS showing location of existing electrical infrastructure.

Chorus telecommunications cables exist in Lower Shotover Road. It is anticipated that connection to the network can be made, and that the new subdivision would be serviced with reticulation to meet the service providers standards.

All existing and proposed servicing infrastructure is underground.

It is not anticipated that there will be any supply or capacity issues for these services and connection will be made available from existing infrastructure in accordance with the relevant service provider's specifications.

11 CONCLUSION

The proposed subdivision is not considered to have significant impacts on the infrastructure network. Infrastructure already exists that can cater for additional demand.

Any new infrastructure will be constructed and paid for the by the applicant.
Other non-Council infrastructure and network utilities exist and have capacity to supply this subdivision.

LEGEND

EXTENT OF EARTHWORKS

CONTOUR MAJOR (2.0m interval)

CONTOUR MINOR (0.5m interval)

PART LOT 1
DP 22781

LOT 2
0.33ha

DRIVEWAY

BUILDING FFL 423.00m

LOT 1
2.99ha

MAX CUT 2.6m

LOT 6
DP 463532

418.0
420.0
422.0
424.0
426.0
428.0
414.0
416.0

A

A'

FOR REVIEW

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By
-	-	-	-

PROPOSED EARTHWORKS PLAN FOR PROPOSED LOT 1
208A LOWER SHOTOVER ROAD, SPEARGRASS FLAT

Client: KAYE STALKER	Surveyed: -	Date: -	Job No.: 15792	Drawing No.: 02	
Notes: All dimensions shown are in meters unless shown otherwise. Any person using Clark Fortune McDonald drawings and other data accepts the risk of: - Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions. - Ensuring the information is the most recent issue. - Copyright on this drawing is reserved.	Drawn: BM	Date: 22.11.22	Scale: 1:150 @ A1, 1:300 @ A3	SIGETVAR,??	
	Checked: -	Date: -	Datum & Level: MT NIC 2000, NVZD 2016	Rev.: -	

S:\JOBS\15700\15792\acad\15792_02_Earthworks Plan.dwg Plotted: 19.12.2022

LEGEND

EXTENT OF EARTHWORKS

CONTOUR MAJOR (2.0m interval)

CONTOUR MINOR (0.5m interval)

LEGEND
EARTHWORKS

Fill Material
- 3.5m to 4.0m
- 3.0m to 3.5m
- 2.5m to 3.0m
- 2.0m to 2.5m
- 1.5m to 2.0m
- 1.0m to 1.5m
- 0.5m to 1.0m
- 0m to 0.5m

Cut Material
- -0m to -0.5m
- -0.5m to -1.0m
- -1.0m to -1.5m
- -1.5m to -2.0m
- -2.0m to -2.5m
- -2.5m to -3.0m

EARTHWORKS VOLUMES:

2500m³ FILL (SOLID)
1000m³ CUT (SOLID)
3005m² AREA

418.0
420.0
422.0
424.0
414.0
416.0
426.0
428.0
MAX FILL 3.7m
LOT 2
0.33ha
DRIVEWAY
BUILDING FFL 423.00m
LOT 426.0
2.99ha
MAX CUT 2.6m
A
A'
LOT 6
DP 463532

FOR REVIEW

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By
-	-	-	-

PROPOSED EARTHWORKS PLAN FOR PROPOSED LOT 1 208A LOWER SHOTOVER ROAD, SPEARGRASS FLAT

Client: KAYE STALKER	Surveyed: -	Date: -	Job No.: 15792	Drawing No.: 02	
Notes: All dimensions shown are in meters unless shown otherwise. Any person using Clark Fortune McDonald drawings and other data accepts the risk of: - Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions. - Ensuring the information is the most recent issue. - Copyright on this drawing is reserved.	Drawn: BM	Date: 22.11.22	Scale:	1:150 @ A1 1:300 @ A3	
	Checked: -	Date: -	Datum & Level: MT NIC 2000 NVZD 2016		Rev.: -

S:\JOBS\15700\15792\acad\15792_02_Earthworks Plan.dwg Plotted: 19.12.2022

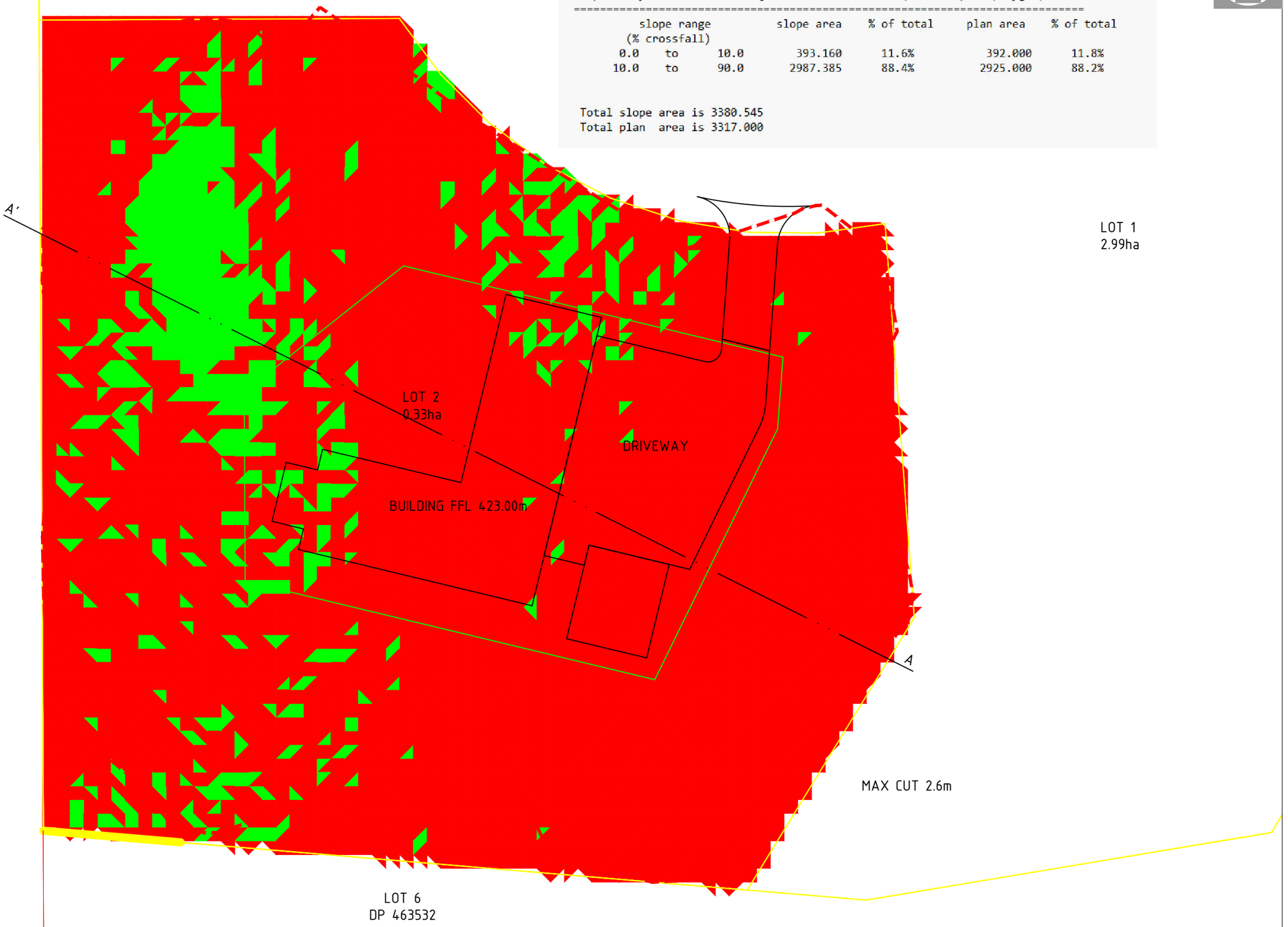
% CROSSFALL

0.0	to	10%	
10.0	to	90%	

Slope analysis for tin "tin QLDC LIDAR CROPPED" - (with no plan polygon)

slope range (% crossfall)			slope area	% of total	plan area	% of total
0.0	to	10.0	393.160	11.6%	392.000	11.8%
10.0	to	90.0	2987.385	88.4%	2925.000	88.2%

Total slope area is 3380.545
Total plan area is 3317.000



PART LOT 1
DP 22781

FOR REVIEW

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

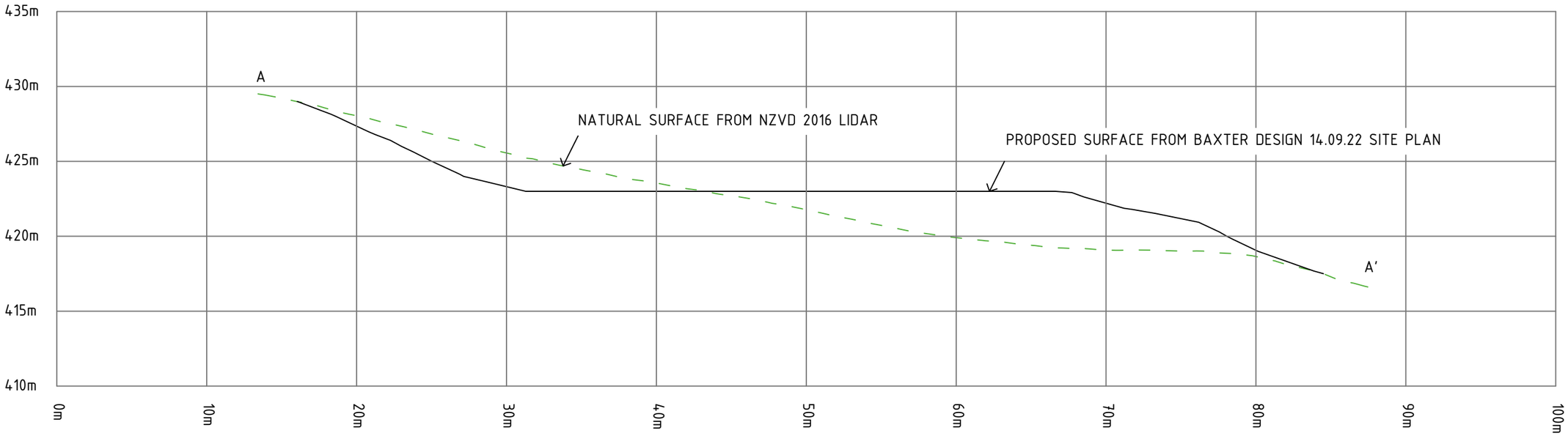
309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By
-	-	-	-

PROPOSED EARTHWORKS PLAN FOR PROPOSED LOT 1 208A LOWER SHOTOVER ROAD, SPEARGRASS FLAT

Client: KAYE STALKER	Surveyed: -	Date: -	Job No.: 15792	Drawing No.: 02
Notes: All dimensions shown are in meters unless shown otherwise. Any person using Clark Fortune McDonald drawings and other data accepts the risk of: - Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions. - Ensuring the information is the most recent issue. - Copyright on this drawing is reserved.	Drawn: BM	Date: 22.11.22	Scale: 1:150 @ A1, 1:300 @ A3	
	Checked: -	Date: -	Datum & Level: MT NIC 2000 NVZD 2016	Rev.: -

S:\JOBS\15700\15792\acad\15792_02_Earthworks Plan.dwg Plotted: 19.12.2022



SECTION A - A'

FOR REVIEW

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By
-	-	-	-

PROPOSED EARTHWORKS PLAN FOR PROPOSED LOT 1 208A LOWER SHOTOVER ROAD, SPEARGRASS FLAT SECTION A

Client: KAYE STALKER	Surveyed: -	Date: -	Job No.: 15792	Drawing No.: 02
	Drawn: BM	Date: 22.11.22	Scale: 1:150 @ A1, 1:300 @ A3	
	Checked: -	Date: -	Datum & Level: MT NIC 2000, NVZD 2016	Rev.: -

Notes:
All dimensions shown are in meters unless shown otherwise.
Any person using Clark Fortune McDonald drawings and other data accepts the risk of:
- Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions.
- Ensuring the information is the most recent issue.

S:\JOBS\15700\15792\acad\15792_02_Earthworks Plan.dwg Plotted: 19.12.2022

KAYE STALKER

208A LOWER SHOTOVER ROAD, QUEENSTOWN

GEOTECHNICAL ASSESSMENT
FOR PROPOSED RESIDENTIAL SUBDIVISION

DATE: 14 DECEMBER 2022

REF: GL22-059.1

geotago
Engineering Geology & Geotechnics

Report Quality Control

Report prepared by: Geotago Ltd
36 Glencoe Road
Arrowtown Junction
9371

Document Control

Report Title	Geotechnical Assessment for Proposed Residential Subdivision
Project Number	22-059
Document Reference	GL22-059.1
Client	Kaye Stalker

Rev	Date	Revision Status	Author
A	14 Dec 2022	Issued to Client	Peter Forrest

Approval

Reviewer	Title	Date Signed
Peter Forrest BSc PhD FGS CMEngNZ (PEngGeol)	Director Principal Engineering Geologist	14 Dec 2022

Signature of reviewer

Executive Summary

Scope of Work		Geotago Ltd has been engaged to conduct a geotechnical investigation of the ground conditions at 208A Lower Shotover Road and make appropriate recommendations for resource consent for foundations, earthworks, stormwater, and wastewater disposal.
Current Site Status		The site is the proposed subdivision of the existing property that has not been previously developed.
Development Proposals		Lot 1 and 2 being a proposed subdivision of Lot 1 DP304273. Lot 2 to comprise a new single building platform for a 300m² house, with onsite stormwater and effluent disposal systems
Site Details	Location	Lot 1 DP304273, 208A Lower Shotover Road, Speargrass Flat, Queenstown.
	History	Open pasture and forestry, with no history or previous development.
Ground Conditions	Published Geology	Late Pleistocene Glacial Till, with Rakaia Terrane Schist in close proximity.
	Previous Investigations	None.
	Site Geology	Loess soils over glacial deposits comprising sandy gravels over weathered schist.
	Hydrogeology	Depressed groundwater at the building platform.
	Environmental Condition	No environmental hazards are expected.
Natural Hazards	Liquefaction	Site investigations have proven dense soils and a depressed groundwater therefore not prone to liquefaction. ORC Domain A.
	Alluvial landforms	Nothing to influence the site.
	Seismic characteristics	Seismic Soil Class C considered appropriate at this stage of design. No active faults in proximity but design should be cognisant of NZS1170.5.
Geotechnical Considerations	Slope Stability	No stability issues.
	Building Platform	Earthworks required to form a cut to fill platform.
	Foundations	NZS3604 'Good Ground' present which will provide an ultimate bearing capacity of 300kPa for traditional shallow foundations or waffle slab-on-ground solutions when the glacial till, engineered fill or weathered schist is mobilised for foundations. Loess soils will provide a reduced UBC of 200kPa.
	Earthworks	Standard conditions apply to align with QLDC Code of Practice. Site won material is suitable for reuse subject to appropriate screening.
Stormwater Disposal	Stormwater disposal can be through soakage to ground but harvesting of roof water should be considered to augment water supply.	
Wastewater Disposal	Category 4 Soils (Loess). A package plant home aeration type system capable of the disposal of secondary treated effluent according to ASNZS1547 standards via a shallow pressure compensating dripper irrigation (PCDI) distribution or discharge beds/trenches are considered appropriate.	

Limitations

Geotago Ltd has undertaken this assessment in accordance with the brief as provided, based on the site and location as shown on Drawings 001 & 002. This report has been provided for the benefit of our client, and for the authoritative council to rely on for the purpose of processing the consent for the specific project described herein. No liability is accepted by this firm or any of its directors, servants or agents, in respect of its use by any other person, and any other person who relies upon information contained herein does so entirely at their own risk.

Table of Contents

Drawings

Appendices

1 Introduction

1.1 Project Brief

Geotago Ltd has been commissioned by the client Kaye Stalker in conjunction with JE&A to carry out a geotechnical assessment for the purposes of gaining resource consent for the proposed two lot subdivision of Lot 1 DP 304273, 208A Lower Shotover Road, Queenstown.

This report will form part of the documentation submitted to Queenstown Lakes District Council (QLDC) in support of the submission. This report includes a summary of the investigations undertaken in order to provide pertinent information on the following:

- Site Details
- Ground and groundwater conditions
- Natural hazards
- Building platform preparation
- Geotechnical considerations for foundations, retention and earthworks
- Preliminary Soakage testing for on-site stormwater management assessment.
- Site & Soils Assessment for wastewater disposal to ground.

The site location is presented in Drawing 001.

1.2 Proposed Development

The development will comprise the formation of Lots 1 and 2 being a proposed subdivision of Lot 1 DP304273. Lot 1 will maintain the existing dwelling on 2.99ha of land, with Lot 2 (reference the 'site' and the main subject of this report) being 0.33ha with a new building platform of some 890m^2. Access to Lot 2 and the new platform will be off the current driveway.

The site will accommodate a new house and separate garage, measuring approximately 300m^2 with driveway and hardstand areas. The likely footprint of the new build is shown on Drawing 002, but there are no structural or design details known at this stage.

A preliminary scheme layout of the subdivision, together with proposed earthworks is presented in Appendix A.

2 Site Information

2.1 Site Description

The main property is located at the end of a private driveway that is accessed directly off and east of Lower Shotover Road. The property is situated in the undulating landscape of Speargrass Flat and is immediately adjacent and west of the Arrow Irrigation scheme.

The legal description of the property is Lot 1 DP 304273.

The proposed Lot 2 of the subdivision (the site) will be located in the south west corner of the wider property, with its southern and western boundaries formed with adjacent residential properties. The eastern and northern lot boundaries will be internal to the proposed Lot 1. Access will be gained directly from the current private driveway.

2.2 Topography

The site has a generally west north westerly aspect , undulating in nature with gradients ranging from 9 to 20°. The upper section of the property along the eastern boundary sits at 430m AOD, on a north trending ridge (schist outcrop) that falls to 425m AOD at the north east corner of the site. Slopes from the ridge slopes down into a central shallow basin, before falling away at increasingly steep gradients to the north west.

The Arrow Irrigation Race with no evidence of any ponding or erosional damage, is located on higher ground directly to the south east of the site. The main site features are shown on Drawing 002.

2.3 Surface Water and Drainage

There are no surface water courses on the site. Despite the topography, there is no evidence of any ephemeral streams or surface drainage paths across the site.

A low lying area to the east of the high schist ridge appears to be verdantly vegetated indicating subsurface flow, but this is not in the site's catchment or influential to the site.

Surface water will flow across the site to the north west.

2.4 Site History and Aerial Photography

Aerial photographs available from the Google Earth Images, Retrolens.nz and the QLDC mapping data set dating from 1954 to 2019 were studied to observe the site over time and assess the geomorphological setting.

The main points of interest from the review of historic aerial photography is summarised in Table 1 below:

Table 1: Summary of Historical Photography

Date	Description
1956	Open fields/paddocks. The Arrow Race is clearly seen as is the wetland to the east of the high ridge that forms the site's eastern boundary.
2001	Open pasture. Some rural subdivision and housing seen in the areas to the north and west.
2010	The main dwelling and access driveway are shown. The site remains open pasture.
2019	No change from the above to the current configuration.

There are no discernible geomorphological features of note.

2.5 Services and Utilities

It is understood that the current property is serviced by its own private reticulated stormwater, effluent and potable water systems. The latter is currently the Glenpanel Scheme, that is being supported by Council reticulated water.

2.6 Previous Site Investigations

There are no known site investigation reports for the property.

2.6.1 NZGS Database

The New Zealand Geotechnical Database (NZGD) has been reviewed for geotechnical investigation data within the vicinity of the project site. No data is available for this location.

3 Site Investigation Details

3.1 Site Assessment

Geotago Ltd completed an engineering geological assessment of the subject property on 12 December 2022, which included a general site walkover and subsurface investigations. The geotechnical investigation comprised 5 test pits advanced to a maximum depth of 1.5m where they met with effective refusal from the excavator on dense material. Two Scala penetrometer tests were completed at test pit locations where the proposed earthworks are minimal in terms of cut and fill depths.

The investigations were located in the vicinity of the building platform and potential dwelling footprint as shown on Drawing 002.

3.2 Investigation Logging

Soils recovered from the test pits have been logged and are presented in Appendix B. Logging of the soil encountered has been undertaken in accordance with NZ Geotechnical Society Guidelines for the Field Classification and Description of Soil and Rock for Engineering Purposes.

The Scala penetrometer results have been plotted on logs as presented in Appendix B. Determination of the soil density as tested by the Scalas has been undertaken in accordance with NZ Geotechnical Society Guidelines for the Field Classification and Description of Soil and Rock for Engineering Purposes, Table 2.8.

4 Subsurface Conditions

4.1 Geological Setting

The Geological Map of New Zealand, Sheet 18 (Wakatipu), at a scale of 1:250,000 maps the site as being underlain by Late Pleistocene glacial deposits comprising generally unweathered to slightly weathered, poorly sorted, loose boulder gravel, sand and silt (glacial till).

The area to the south east of the site is underlain by Aspiring lithologic association pelitic schist of the Rakaia terrane. The Rakaia terrane consists of abundant laminated pelitic greyschist and subordinate psammitic greyschist; minor greenschist and metachert.

Given the site observations of the immediate topography, some localised outcrops of the schist in close proximity to the site and with reference to the geological map, rock head will very close to ground surface in the area of the proposed building platform, overlain by shallow superficial soils.

4.2 Ground Conditions & Stratigraphy

Apart from the thin layer of surficial topsoil, the site is underlain by loess and glacial till overlying the weathered surface of the Rakaia terrane schist. The loess extends to a maximum depth of 0.8m in TP103, which coincides with the shallow basin feature, but generally to approximately 0.6m below the surface of the site.

Below the loess, the glacial till extends to a maximum depth of 1.5m, where it was either too dense or weathered schist was met, as the excavator could not excavate further. The weathered horizon of the schist was identified in the arisings from the pit in TP105 only, being easily excavated for approximately 200-300mm before becoming too competent for the excavator to break out.

Full details of the observed subsurface stratigraphy can be found within the test pit logs contained in Appendix B.

A summary of the sub-surface conditions identified in the investigations undertaken is presented below in order of depth from the ground surface. The sub-surface conditions have been extrapolated between the investigations undertaken and other available information.

4.2.1 Topsoil

Topsoil comprises organic silty SAND, brown, with roots to depths of approximately 0.2 m.

4.2.2 Loess

The loess is typically described as a loose to tightly packed light brown fine sandy SILT, dry and with some rootlets. The Scala penetrometer results through this material returned blow counts of no greater than 4/100mm of penetration, but generally 2 to 3 blows, indicating a moderate density.

4.2.3 Glacial Till

Till underlies the loess in all of the test pits to depths of between 0.6 and 1.5m. The till is described as a relatively dense sandy GRAVEL with occasional cobble. Scala penetrometer testing met with refusal within the upper profile of the till.

4.3 Groundwater

Groundwater was not encountered in any of the test pits. Given the relatively elevated site position compared to nearby surrounding surface water bodies, the groundwater is anticipated to be relatively deep, such that it will not interfere with earthworks or foundations.

No relevant borehole information was available from the ORC borehole database.

5 Natural Hazards

5.1 General

The Otago Regional Council (ORC) and the QLDC Natural Hazards Portals have been reviewed for the purposes of identifying potential natural hazards that may impact the site. The information from the database is used together with our observations from the site investigation to inform the discussion below.

5.2 Alluvial Fan

The site is not underlain by any form of alluvial fan or alluvial landform. This is concordant with the observations of the test pits, whereby loess and glacial soils overlay shallow schist.

5.3 Flooding

The site is not prone to flooding.

5.4 Liquefaction

The project site is classified as Domain A. This classification suggests that the ground is predominantly underlain by rock or firm sediments, with a low to zero liquefaction potential.

With reference to the QLDC 2012 liquefaction vulnerability study, the site lies outside any zone and as such is considered to have a low to nil risk associated with Liquefaction.

These classifications are aligned with our site investigation data and the fact that the site is close to the crop out position of the Rakaia terrane schist. In addition, groundwater is unlikely to be within 5m of ground level.

5.5 Slope Stability

Although the site is a slope of 15-20°, there are no topographical or geomorphological expression of hummocky ground, back scars or toe lobes within the vicinity of the site or wider area. The hazard database does not zone the site for any form of landslide feature.

5.6 Seismic

The soil classification for the site is Class B, relating to rock within 3m of the ground surface. Based on the investigations undertaken, this is considered an appropriate classification.

No active faults were mapped in the field, however, the active NW Cardrona Fault is shown on the published Qm 18 map approximately 14km east from the site and the Moonlight Fault some 16km to the west. There is a significant seismic risk to the Wakatipu region when the rupture of the alpine fault system occurs; recent probability predictions estimate a magnitude 7.5 or greater is highly likely within the next 45 years. Significant ground shaking is expected from this type of event.

6 Geological Ground Model & Residual Risk

6.1 Ground Model

The geological ground model for the site is based on the collated information presented in this report including the desk top information, intrusive investigation and our interpretation. The ground model is summarised as:

- The site is presently undeveloped and does not appear to have been significantly modified in any form other than for pasture and farming.
- The site is located on gentle to moderately sloping topography which does not display any slope instability features. In addition, the site is remote from steeper slopes and/or slopes prone to the development of slope instability features.
- The site is underlain by competent ground conditions consisting of loess which overlies moderately dense glacial till and ultimately the schist basement. Topsoil mantles the loess to a depth of 200mm.
- The building platform has no surface water features. Given the site's topography surface water will flow to the north west via sheet flow.
- Ground water was not encountered in any of the test pits indicating that the water table is at least 1.5m below ground level, but given the topography and geology, is likely to be >10m depth.
- Groundwater is susceptible to seasonal variations and it is feasible that groundwater levels may rise, or seepage rates increase, over those observed following a period of prolonged rainfall and during the winter months, but not to the extent that it would interfere with foundations.
- The site is not located in the vicinity of an active fault zone but should be considered as seismically active in line with the wider Otago region.
- The site is not considered be risk of liquefaction due the relatively dense, coarse sediments, the presence of shallow rockhead in some areas and generally depressed groundwater levels in the vicinity of the building platform.
- There are no other natural hazards reported for the site.

6.2 Geotechnical Risk and Limitations

Geotechnical investigation and their interpretation are subject to limitations and inherent risk due to the spatial distribution of the investigation points relative to the property/site area and the residual uncertainties of the ground conditions that remains uninvestigated. Therefore the following should be noted:

- Ground conditions can vary between investigations undertaken and there is always some natural variability in ground conditions both laterally and vertically, particularly with recent deposits.
- Small-scale ground anomalies, particularly associated with human disturbance such as demolished buildings, buried services and landscaping works can often be missed by the investigations.
- Ground strength can change with variations in natural water/moisture content, soil type and ground loading. As such, our interpretation and assessments are cognisant that ground conditions may differ to those reported at the time of this investigation due to periods of wet weather and/or during the winter months.
- The impact of climate change and its influence on ground conditions from a geotechnical perspective is an area being currently researched. However, based on our current understanding effects will include changes in groundwater regimes, soil saturation and surface water characteristics all of which may have a future effect on any current site development.

7 Geotechnical Considerations

7.1 General

Based on our ground model developed for the site, we are of the opinion that the site is generally suitable for the proposed residential subdivision and the future development comprising two storey lightweight residential structures.

Earthworks and drainage should be undertaken in accordance with NZS4404 Land Development and Subdivision Engineering, QLDC Land Development and Subdivision Code of Practice, and NZS4431:2022 Code of Practice for Earth Fill for Residential Development.

When considering conventional light timber framed dwellings, developments should be in accordance with NZS3604, however provisions should be made for AS2870 expansive site class.

Other relevant Codes and Standards include but not restricted to:

- NZS 1170:2004: 'Structural design actions'.
- New Zealand Building Code: Clause B1
- District and Regional Plan provisions on residential development.

Specific comments and recommendations are provided in the sections below.

7.2 Site Preparation

7.2.1 Building Platform

A building platform will need to be developed through a cut to fill exercise. The cut will be from the ridge flank on the east of the platform and is likely to require the excavation of schist bedrock. The

schist and overlying glacial till will be suitable as site won fill. The overlying loess is less suitable as fill can be used for landscaping and blending with the hard rock.

7.2.2 Standard Preparation

During the earthworks operations and excavation to the required levels all topsoil, uncontrolled fill, organic matter and other unsuitable materials should be removed from the construction areas in accordance with the recommendations of NZS 4431:2022. The subgrade should be inspected prior to fill being placed and/or foundations being constructed to establish it has suitable bearing capacity and is clear of unsuitable materials.

Subject to confirmation on site, aside from topsoil, site won material is considered suitable for placement as fill provided the following measures are taken:

- Fill areas to be benched/tied in.
- Free draining material and drainage system placed immediately behind any retaining walls.
- Appropriate lift height, compaction and certification for fill greater than 600mm.

Appropriate shallow graded sediment control measures should be installed during construction where rainwater and drainage run-off over exposed soils is likely. If slope gradients in excess of 5% are proposed in soils then the construction and lining of drainage channels is recommended, e.g. with geotextile and suitably graded granular material, or similarly effective armouring.

Exposure to the elements should be limited for all soils and covering the soils with polythene sheeting will reduce degradation due to wind, rain and surface run-off. Under no circumstances should water be allowed to pond or collect near or under a foundation or slab. This can be avoided with shaping of the subgrade to prevent water ingress or ponding.

If fill is utilised as bearing for foundations it should be placed and compacted in accordance with the recommendations of NZS 4431:2022 and certification provided to that effect.

The upper soils present at the site are prone to erosion, both by wind and water, and should be protected by hardfill capping or re-topsoiled/mulched and re-vegetated as soon as the finished batter or subgrade levels are achieved.

7.3 Batter Slopes

Recommended temporary and permanent batter angles for cut slopes up to a maximum of 3.0m in both wet and dry conditions are presented below in Table 2. The batters provided should be adhered to where more than one soil type is present within the slope or defaulted to the shallower angle where appropriate.

Slopes that are required to be steeper than those described below should be structurally retained or subject to specific geotechnical design.

Table 2: Batter angles for soil slopes

Material Type	Recommended Maximum Batter Angles for Temporary Cut Slopes Formed in Soils		Recommended Maximum Batter Angles for Permanent Cut Slopes Formed in Dry (Drained) Soils
	Wet ground	Dry Ground	
Topsoil	2H:1V	1H:2V	2H:1V (grassed/planted
Loess	1H:1V	1H:2V	2H:1V
Glacial Till	1H:2V	1H:3V	1H:2V
Schist	1H:4V	1H:4V	1H:4V (subject to on-site assessment)
Engineered Fill	1H:1V	1H:2V	2H:1V (unretained, drained)

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. Should construction and earthworks be undertaken during the winter period, the frequency of the inspections should increase, with site inspections being made after any significant weather event.

Seepages are common in excavations completed in hillside areas and drainage measures, such as horizontal drains, may be required if excessive groundwater seepages are encountered during excavation. This may well be the case in the deeper excavations where groundwater may be encountered. The final design and location of all sub-soil drainage works should be confirmed during construction by a suitably qualified and experienced Geotechnical Engineer or Engineering Geologist.

Inspections of soil cuts will be required during construction to confirm the above recommendations and based on the site observations a reduction in batter angles from those provided above may be required and conversely, if materials are preforming, may be steepened if site conditions and construction sequencing/programme are favourable.

7.4 Rock Cut Considerations

Given the nature of the earthworks and finished topography anticipated, some breaking out of rock may be required but not to produce significant vertical cuts. The excavation will be achieved using traditional plant (e.g. heavy excavator and toothed bucket), with blasting or rock breaking not required. The need for rock face stabilisation is considered highly unlikely.

However, should design change or rock be encountered that requires deeper excavation, observations of cut rock faces in the district, suggests batters in the schist bedrock should be formed at an angle of 1(h) to 4(v) or approximately 76° from the horizontal (See Table 2).

7.5 Engineered Fill Slopes

As recommended in Table 2 above, unretained engineered fill slopes should be formed at 2H:1V (or flatter) providing they are well drained and compacted to the appropriate specification based on NZS4431. If steeper grades are required, the fill will require geogrid reinforcement to form slopes up to 45° but subject to specific engineering design from a chartered professional engineer.

7.6 Construction Monitoring & Certification

Given the extent of the earthworks and the volume of cut and fill required for the building platform, the earthworks and placement of fill should be undertaken in general accordance of Queenstown Lakes District Council's Land Development and Subdivision Code of Practice (incorporating NZS4404) and NZS4431:2022.

Of particular importance are the inspection and certification of the following:

- Subgrade inspection.
- Suitability of site won material for reuse as engineered fill.
- Performance of temporary cut batters.
- Foundation inspections.
- Fill >600mm depth or built as a slope >2H:1V.

7.7 Services

We recommend that all underground services are backfilled with adequately compacted backfill to minimise the risk of significant trench consolidation and settlement.

Trench excavations should be shored or battered appropriately in accordance with the OSH/DOL Approved Code of Practice for Safety in Excavations and Shafts for Foundations (April 2000).

The contractor is expected to employ the appropriate plant and machinery to undertake the excavation and retaining wall construction.

7.8 Slope Stability

The proposed building platform is located on moderate sloping topography which is underlain by competent ground conditions and is remote from steeper slopes and/or slopes prone to the development of slope instability features.

The modest overall slope angles and underlying competent ground conditions in the vicinity of the proposed building platform should provide a safe and stable ground with respect to slope stability conditions.

A safe and stable building platform is defined as having a low to negligible risk of failure over the lifetime of the dwelling and is assessed as a factor of safety where a quantitative slope stability assessment is undertaken. Given the modest slope angles in the vicinity of the site, we consider that a qualitative assessment of slope stability (as provided above) is acceptable for defining risk for this site and that a more rigorous quantitative analysis is not required.

Site earthworks are required to provide a suitable level building platform within the existing slopes, and we consider that appropriate site development constraints are required in order to maintain safe and stable conditions. This is addressed in Section 7.3 of this report.

7.9 Retaining Walls

Engineered retaining walls will be required on site under the following circumstances:

- where the retention height is greater than 1.5m.
- where retaining wall supports any surcharged loads such as sloping ground and structure/traffic loads.
- where retaining wall failure will affect the stability and integrity of adjacent structures and neighbouring properties.

Table 3 provides geotechnical parameters for the engineered retaining wall design as required:

Table 3: Retaining Wall Design Parameters

Unit	Cohesion (c')	Friction Angle (ϕ')	Ultimate Bearing Capacity (kPa)	Unit Weight (γ)
Glacial Till	0 kPa	28-32°	<150kPa	18kN/m^3
Schist Bedrock	>100kPa	30°	900kPa	27kN/m^3
Schist Defects	0 along defect	22-25° along defect	-	-

All retaining walls should be constructed with appropriate toe drainage and backfilled to their full height with lightly compacted free draining granular material or other appropriate drainage

solution. Toe drainage should be discharged at a point that will not impact or influence the construction works on site or alternatively be connected to the reticulated stormwater system.

7.10 Foundation Recommendations

7.10.1 Foundation Design Options

Given that the building platform will be cut into the slope and the downside edge is likely to comprise engineered fill, the foundations of any new dwelling will be in/on glacial till, weathered schist and engineered fill.

On the grounds that the recommendations made in this report are followed and the appropriate standards adhered to, then the foundations suitable for the site are typical NZS3604 types or alternatively could be in the form of a waffle slab-on-ground. The latter can offer increased thermal insulating properties and provide easier construction.

7.10.2 Bearing Capacity & Settlement

The bearing capacity has been determined from our interpretation of the engineering description of the soil conditions, observations from the test pits on the soil behaviour and relative density measurements based on the site-specific testing undertaken. The values presented take into consideration natural variability of ground strength likely between investigations undertaken and potential strength reduction associated with saturated soil conditions.

On this basis, the glacial till meets the criteria of NZS3604 Good Ground and as such will provide an geotechnical Ultimate Bearing Capacity of 300 kPa. The weathered schist will also provide at least 300kPa.

It is anticipated that engineered fill placed in accordance with NZS4431 will achieve 300 kPa geotechnical Ultimate Bearing Capacity in accordance with NZS3604 section 3 testing requirements.

If designs change and the finished ground levels result in loess soils daylighting as subgrade, they will provide competent ground by a reduced Ultimate Bearing capacity of 200kPa.

Settlement is expected to be within limits set by NZS3604:2011 for the above allowable bearing capacity stresses.

7.11 Soil Expansivity

There is no specific engineered foundation design required to resist shrink/swell associated with the non-expansive soils encountered on site.

7.12 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 assuming Class C subsoil conditions exists across the site. It is also recommended to refer to the guidelines set out in NZGS/MBIE Earthquake Engineering Module 1 Appendix A.

However, if on excavation of the building platform, rockhead is encountered or is demonstrated to be within close proximity to the surface, then Class B may be adopted.

8 Stormwater Management

8.1 General

Stormwater disposal should be in compliance with the operative District & Regional Plans, the Building Code and recognised New Zealand standards and guidelines. In summary this requires the following:

- Hydrogeological neutrality should be provided within receiving environments (such as overland flow paths, streams and reticulated stormwater systems) with the addition of impervious surfaces. In addition, the disposal of stormwater should not provide a nuisance to neighbouring properties and public infrastructure.
- Stormwater should be managed in such a way as to avoid slope erosion, earthworks batters, retaining walls, building structures and effluent disposal areas.
- Stormwater should be managed in such a way as to have no significant effect on overall slope stability conditions.
- Stormwater should be directed to a public reticulated stormwater system where possible.
- Site development should be mindful of existing surface water features including overland flow paths and appropriate remedial measures should be provided where required.

In particular, we note the following documents pertinent to stormwater management for the proposed development:

- New Zealand Building Code, Clause E1 "Surface Water": E1/VM1.
- New Zealand Water Environment Research Foundation (NZWERF): "On-site Stormwater Management Guideline".

8.2 Site Suitability for Stormwater Disposal

Preliminary soakage testing was undertaken in test pit TP101. The testing comprised the excavation and measured dimensions of the open test pit and the rapid discharge of approximately 500L of potable water from a water bowser to the open pit. The results of the test are summarised on the respective test sheets in Appendix C.

The test pit chosen was thought suitable in terms of the soil profile.

The results of the testing and commentary is provided in Table 4 below. Where soakage was insufficient to allow the pit to empty within the fieldwork period, a regression line plot was generated from the data to extrapolate the estimated time for the pit to empty. Where this is the case the table shows (est.) behind the value. The calculated soakage rate presented is subject to a 0.5 factor to bring it in line with design values for QLDC.

Table 4: Soakage Test Results Summary

Soakage Test	Volume Added	Time to Empty	Calculated Soakage Rate	Factored Soakage Rate	Comments
TP101	~500L	104 mins (est)	1202 mm/hr	601 mm/hr	Moderate soakage. Some siltation from the overlying loess soils.

Based on the results, it is apparent that moderate soakage will be available across the site and that the appropriate design of a soak pit at building consent is considered the suitable stormwater

management solution. A schematic plan showing the location of a soak pit in relation to the house is presented on Drawing 003.

If however water supply is restricted, stormwater management and water storage would benefit from the use of dual purpose detention tanks. These would allow the detention and slow release of stormwater from the roof of any new dwelling, whilst harvesting the water for either potable or irrigation use to supplement any reticulated or private supply.

9 Wastewater Management

9.1 General

At this stage of resource consent application, there are no specific house plans from which a detailed investigation and design for a wastewater management system can be provided. However, based on the site investigation information gained, a site and soil evaluation has been completed in order to demonstrate that the site is capable of wastewater disposal to ground through an appropriate land application system.

It should be noted that a detailed design based on occupancy rate will be required for Building Consent.

9.2 Site & Soil Evaluation

The proposed new site will be in approximately 0.33Ha which will provide enough physical room for a land application system to be designed. As described previously, parts of the wider site have shallow to moderate slopes of approximately 10° with no evidence of natural instability identified during our site investigations that can be used for land application.

During the winter months the area is subject to frost, snow and potential ground freezing. Ground water levels are considered to be greater than 5m depth based on borehole records.

Based on the soil profiles observed in the test pits, the loess soils are sufficiently deep to rely on as the receiving soil and can be generally categorised as Class 4 in accordance with AS/NZS 1547:2012 Table L1. This reflects the low permeability anticipated in the loess soils. The Class 4 categorisation also allows for the potentially shallow rockhead.

As the subject site is:

- outside the Lake Hayes catchment area
- the discharge volume unlikely to exceed 2,000 litres/day
- Is >50m from a water source or well;

under rule 12.A.1.4 of Otago Regional Council's Regional Plan: Water, discharge of human sewage is a permitted activity in this area and will not require consent from the ORC.

A QLDC Wastewater Disposal Site and Soil Assessment Form has been completed and is presented in Appendix D, which takes into account the above parameters and constraints. Drawing 003 presents a schematic layout of the septic tank and effluent disposal area.

9.3 Potential Wastewater System

It is assumed that the future dwellings will have 4 bedrooms. In accordance with AS/NZS1547:2012 this equates to a maximum design occupancy of 7 people. Based upon a typical wastewater flow of 200 L/person/day (AS/NZS 1547:2012 Table H3 – Typical domestic wastewater design flow allowances – New Zealand) this would produce a daily wastewater flow of 1,400 L/day. If the final

owners of the properties choose to have additional or fewer bedrooms, or to integrate water-reduction features in to their design, then a redesign of this initial wastewater sizing can be carried out at the Building Consent level.

Due to the restricted receiving environment, a system with secondary treatment is recommended. The secondary treatment system will incorporate a septic tank stage where heavy solids will undergo anaerobic digestion. Secondary treatment through physical and aerobic biological processes will then treat the wastewater to a higher standard.

AS/NZS 1547:2012 requires the size of the septic tank to be 3,500 litres for a population equivalent of 7 people. This sizing also applies to the primary treatment stage of a secondary treatment system.

It is proposed that either drip irrigation or conventional trenches/beds are used to apply the treated wastewater to the ground for each new property.

9.3.1 Drip Irrigation

Table M1 in AS/NZS 1547:2012 states that the Design Irrigation Rate (DIR) for drip irrigated secondary treated effluent on Category 4 soils is 3.5 mm/day. Based on this design criteria, a minimum irrigation area of 400m^2 is required. The total area required for wastewater disposal on each individual lot (including a 100% reserve area) will therefore be 800m^2. These areas are to be located a minimum of 50m from any of the existing water courses on the site (including any water take bores).

Due to the location of the site and the possibility of perma-frost in winter, it is proposed that the drip irrigation pipes are buried at least 300 mm deep. This will also help to protect against compaction, should vehicles inadvertently traverse the area, although this should be prevented as much as possible.

9.3.2 Conventional Trench/Bed

Table L1 in AS/NZS 1547:2012 states that the Design Loading Rate (DLR) for trenches/beds with secondary treated effluent on Category 4 (moderately structured) soils is 10 mm/day. Based on this design criteria and a 1m wide trench a total of 140 liner metres of pipe (8 x 17.5m lengths) will be required over and area of 140m^2. Including a 100% reserve area the total trench area will therefore be 240m^2.

Alternatively, this could be constructed as two standard trenches 4m wide by 17.5m length.

9.3.3 Further Design

If the examples provided above are too large to incorporate into the landscaping and site layout, further consideration could be given to extending the point of discharge of effluent to the underlying glacial till, where a soil class of 3 can be adopted. This would reduce the area required for either application system, but must be cognisant of potentially shallow rock.

Other restrictions and constraints to be cognisant of to be compliant with District, Regional and NZS standards require the effluent disposal area to be

- 1.5m from a property boundary
- 3.0m from a dwelling
- 50m from a water bore
- 50m from an open water course
- 3.0m from an embankment or cutting
- >0.9m groundwater clearance

Drawings

geotago
Engineering Geology & Geotechnics

KAYE STALKER

208A LOWER SHOTOVER ROAD, SPERGRASS FLAT, QUEENSTOWN

SITE LOCATION PLAN

SCALE: NOT TO SCALE

REF:	DATE:
GL22-059.1 DRW001	12 DECEMBER 2022

geotago
Engineering Geology & Geotechnics

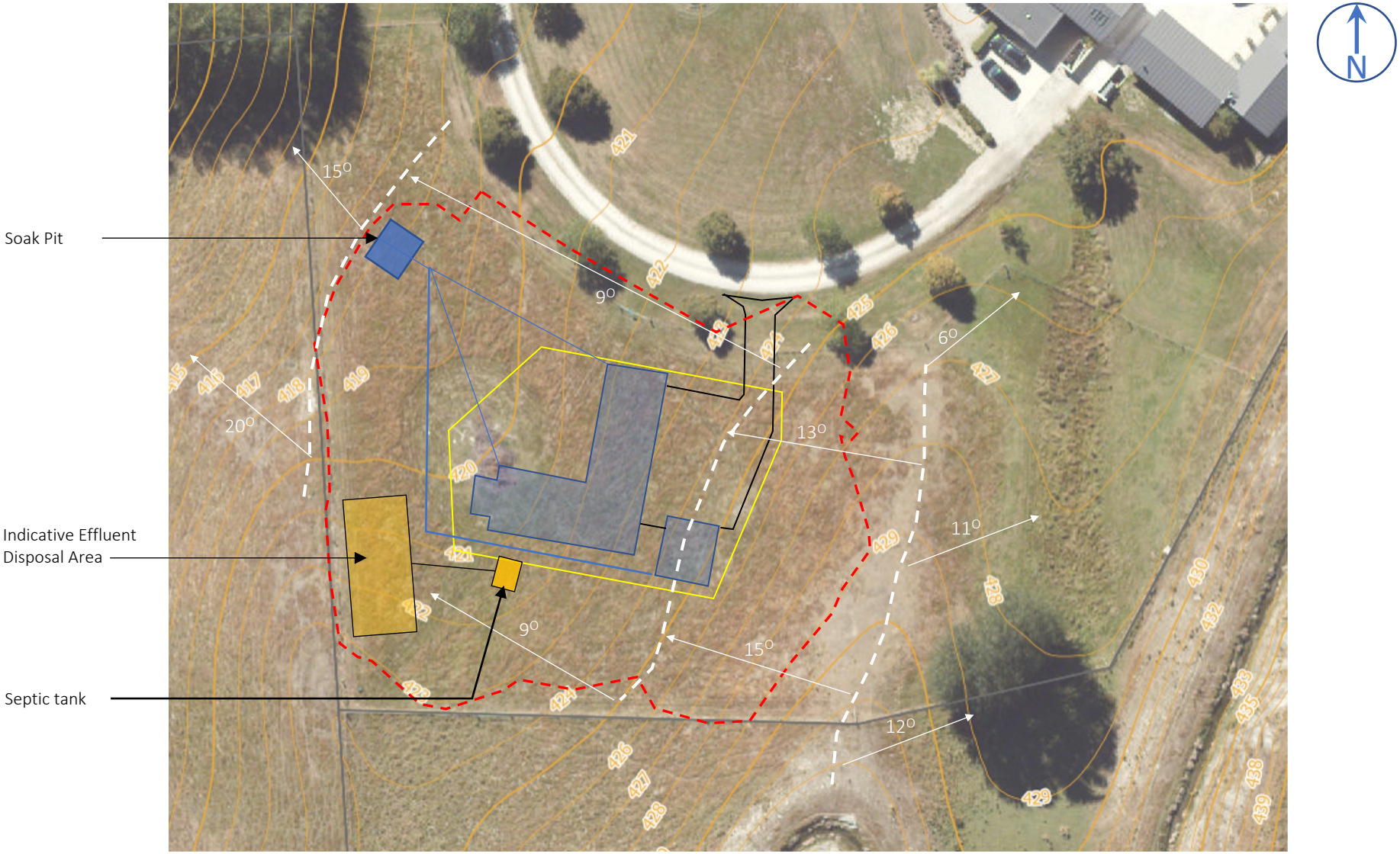
KAYE STALKER

208A LOWER SHOTOVER ROAD, SPEARGRASS FLAT, QUEENSTOWN

SITE INVESTIGATION PLAN

SCALE: NOT TO SCALE

REF:	DATE:
GL22-059.1 DRW002	12 DECEMBER 2022



geotago
Engineering Geology & Geotechnics

KAYE STALKER

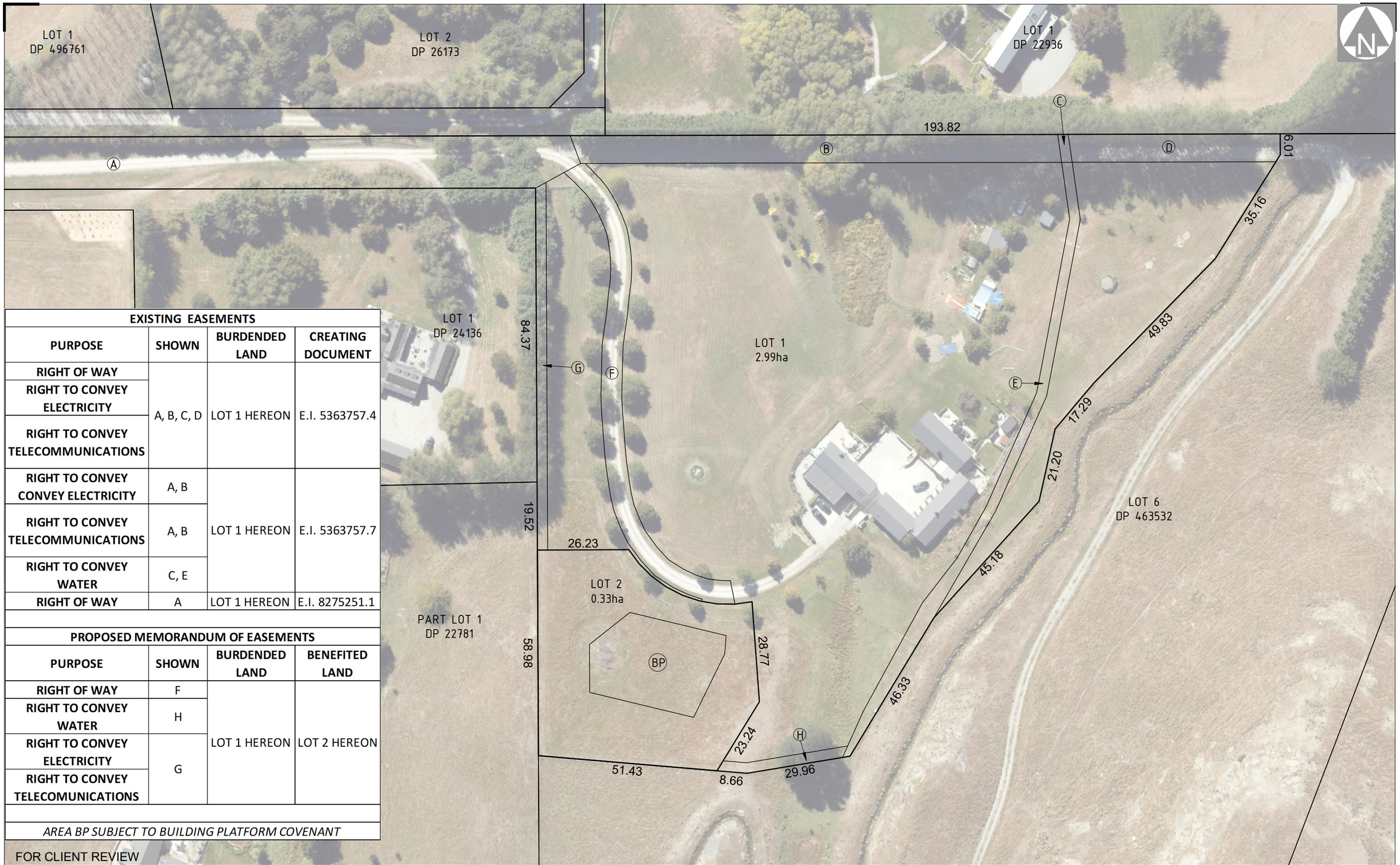
208A LOWER SHOTOVER ROAD, SPEARGRASS FLAT, QUEENSTOWN

STORMWATER & WASTEWATER SCHEMATIC

SCALE: NOT TO SCALE

REF:	DATE:
GL22-059.1 DRW003	12 DECEMBER 2022

Appendix A – Scheme Layout



EXISTING EASEMENTS			
PURPOSE	**SHOWN**	**BURDENDED LAND**	**CREATING DOCUMENT**
RIGHT OF WAY	A, B, C, D	LOT 1 HEREON	E.I. 5363757.4
RIGHT TO CONVEY ELECTRICITY			
RIGHT TO CONVEY TELECOMMUNICATIONS			
RIGHT TO CONVEY CONVEY ELECTRICITY	A, B	LOT 1 HEREON	E.I. 5363757.7
RIGHT TO CONVEY TELECOMMUNICATIONS	A, B		
RIGHT TO CONVEY WATER	C, E		
RIGHT OF WAY	A	LOT 1 HEREON	E.I. 8275251.1

PROPOSED MEMORANDUM OF EASEMENTS			
PURPOSE	**SHOWN**	**BURDENDED LAND**	**BENEFITED LAND**
RIGHT OF WAY	F	LOT 1 HEREON	LOT 2 HEREON
RIGHT TO CONVEY WATER	H		
RIGHT TO CONVEY ELECTRICITY	G		
RIGHT TO CONVEY TELECOMUNICATIONS			

AREA BP SUBJECT TO BUILDING PLATFORM COVENANT

FOR CLIENT REVIEW

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By
-	-	-	-

LOT 1 & 2 BEING A PROPOSED SUBDIVISION OF LOT 1 DP 304273

LOWER SHOTOVER ROAD, SPEARGRASS FLAT, QUEENSTOWN

Client: KAYE STALKER	Surveyed: -	Date: -	Job No.: 15792	Drawing No.: 01 Sheet 002	
Notes: All dimensions shown are in meters unless shown otherwise. Any person using Clark Fortune McDonald drawings and other data accepts the risk of: - Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions. - Ensuring the information is the most recent issue. - Copyright on this drawing is reserved.	Drawn: BM	Date: 19.09.22	Scale: 1:500 @ A1, 1:1000 @ A3		
	Checked: CH	Date: -	Datum & Level: MT NIC 2000 -	Rev.: -	

S:\JOBS\15700\15792\acad\15792_01_Scheme Plan.dwg Plotted: 20.09.2022

LEGEND

EXTENT OF EARTHWORKS

CONTOUR MAJOR (2.0m interval)

CONTOUR MINOR (0.5m interval)

PART LOT 1
DP 22781

LOT 1
2.99ha

LOT 2
0.33ha

BUILDING FFL 423.00m

DRIVEWAY

MAX CUT 2.6m

LOT 6
DP 463532

A

A'

414.0

416.0

418.0

420.0

422.0

424.0

426.0

428.0

FOR REVIEW

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By
-	-	-	-

PROPOSED EARTHWORKS PLAN FOR PROPOSED LOT 1
208A LOWER SHOTOVER ROAD, SPEARGRASS FLAT

Client: KAYE STALKER	Surveyed: -	Date: -	Job No.: 15792	Drawing No.: 02 Sheet 001	
Notes: All dimensions shown are in meters unless shown otherwise. Any person using Clark Fortune McDonald drawings and other data accepts the risk of: - Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions. - Ensuring the information is the most recent issue. - Copyright on this drawing is reserved.	Drawn: BM	Date: 22.11.22	Scale: 1:150.000 @ A1 1:300 @ A3		
	Checked: -	Date: -	Datum & Level: MT NIC 2000 NVZD 2016	Rev.: -	

S:\JOBS\15700\15792\acad\15792_02_Earthworks Plan.dwg Plotted: 23.11.2022

LEGEND

EXTENT OF EARTHWORKS

CONTOUR MAJOR (2.0m interval)

CONTOUR MINOR (0.5m interval)

LEGEND
EARTHWORKS

Fill Material
- 3.5m to 4.0m
- 3.0m to 3.5m
- 2.5m to 3.0m
- 2.0m to 2.5m
- 1.5m to 2.0m
- 1.0m to 1.5m
- 0.5m to 1.0m
- 0m to 0.5m

Cut Material
- -0m to -0.5m
- -0.5m to -1.0m
- -1.0m to -1.5m
- -1.5m to -2.0m
- -2.0m to -2.5m
- -2.5m to -3.0m

EARTHWORKS VOLUMES:

2500m³ FILL (SOLID)
1000m³ CUT (SOLID)

418.0
420.0
422.0
424.0
426.0
428.0
414.0
416.0
A
A'
MAX FILL 3.7m
MAX CUT 2.6m
LOT 1
2.99ha
LOT 2
0.33ha
DRIVEWAY
BUILDING FFL 423.00m
LOT 6
DP 463532

FOR REVIEW

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

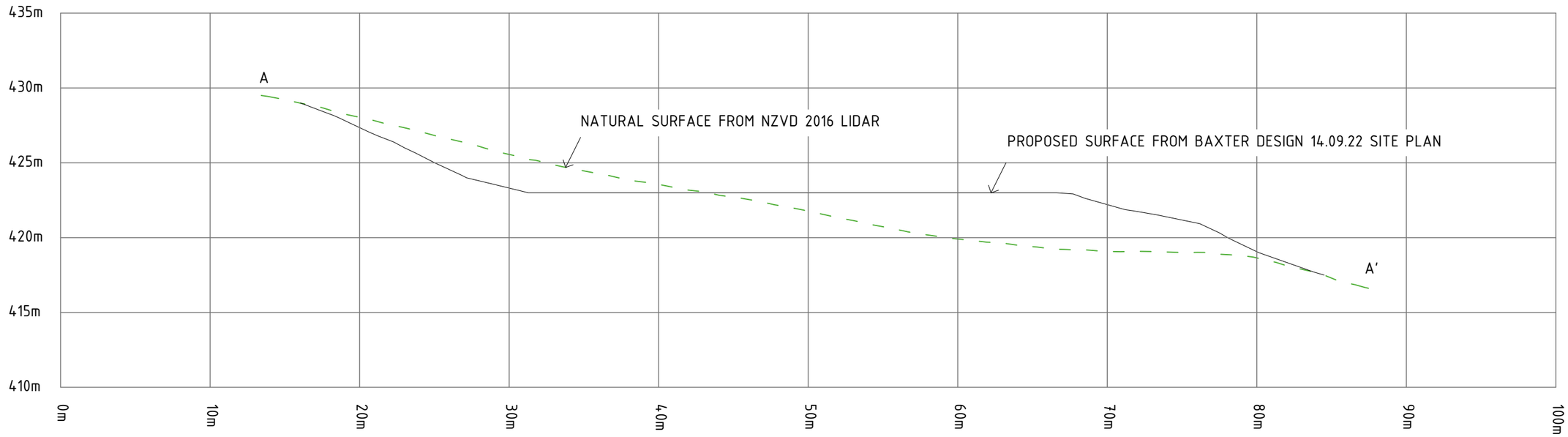
309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By
-	-	-	-

PROPOSED EARTHWORKS PLAN FOR PROPOSED LOT 1 208A LOWER SHOTOVER ROAD, SPEARGRASS FLAT

Client: KAYE STALKER	Surveyed: -	Date: -	Job No.: 15792	Drawing No.: 02 Sheet 002	
Notes: All dimensions shown are in meters unless shown otherwise. Any person using Clark Fortune McDonald drawings and other data accepts the risk of: - Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions. - Ensuring the information is the most recent issue. - Copyright on this drawing is reserved.	Drawn: BM	Date: 22.11.22	Scale: 1:150.000 @ A1 1:300 @ A3		
	Checked: -	Date: -	Datum & Level: MT NIC 2000 NVZD 2016	Rev.: -	

S:\JOBS\15700\15792\acad\15792_02_Earthworks Plan.dwg Plotted: 23.11.2022



SECTION A - A'

FOR REVIEW

CLARK FORTUNE McDONALD
LAND SURVEYORS - LAND DEVELOPMENT - PLANNING CONSULTANTS
QUEENSTOWN | DUNEDIN | CHRISTCHURCH | GORE

309 Lower Shotover Road, P.O.Box 553 Queenstown
Tel. (03)441-6044, Email admin@cfma.co.nz, www.cfma.co.nz

Rev.	Date	Revision Details	By
-	-	-	-

PROPOSED EARTHWORKS PLAN FOR PROPOSED LOT 1 208A LOWER SHOTOVER ROAD, SPEARGRASS FLAT SECTION A

Client: KAYE STALKER	Surveyed: -	Date: -	Job No.: 15792	Drawing No.: 02 Sheet 003
Notes: All dimensions shown are in meters unless shown otherwise. Any person using Clark Fortune McDonald drawings and other data accepts the risk of: - Using the drawings and other data in electronic form without requesting and checking them for accuracy against the original hard copy versions. - Ensuring the information is the most recent issue. - Copyright on this drawing is reserved.	Drawn: BM	Date: 22.11.22	Scale: 1:150.000 @ A1, 1:300 @ A3	
	Checked: -	Date: -	Datum & Level: MT NIC 2000 NVZD 2016	Rev.: -

S:\JOBS\15700\15792\acad\15792_02_Earthworks Plan.dwg Plotted: 23.11.2022

Appendix B – Engineering Logs

Test Pit Log

Project:	208A Lower Shotover Road	Project Number:	GL22-059
Site Location:	Speargrass Flat	Client:	Kaye Stalker
Test Pit Number:	TP101		Sheet 1 of 1

Depth (m)	Water Level	Geological Unit	Sample	Soil Rock Description	Legend	Depth
		Topsoil		Silty SAND with roots and rootlets, dark brown. Dry.		
0.5		Loess		Sandy SILT, light brown, loose to tightly packed, dry. Sand fine grained		0.5
1.0		Glacial Deposits		Sandy GRAVEL, light brownish grey. Tightly packed, dry. Sand medium to coarse grained. Gravels fine to coarse subrounded to rounded river gravels and laminated broken schist.		1.0
1.5						1.5
2.0				End of Pit - Hard digging		2.0
2.5						2.5
3.0						3.0
3.5						3.0

Date Excavated: 12 Decmber 2022	Equipment: 1.8T tracked excavator with 400mm tooth bucket
Logged By: PF	Contractor: Earthworks & Drainage

Geotago Ltd
Arrow Junction
Queenstown 9371
New Zealand

T: +64 272 699 736
E: pete@geotago.nz
W: www.geotago.nz

geotago
Engineering Geology & Geotechnics

Notes: Soak Pit

Test Pit Log

Project:	208A Lower Shotover Road	Project Number:	GL22-059
Site Location:	Speargrass Flat	Client:	Kaye Stalker
Test Pit Number:	TP102		Sheet 1 of 1

Depth (m)	Water Level	Geological Unit	Sample	Soil Rock Description	Legend	Depth
		Topsoil		Silty SAND with roots and rootlets, dark brown. Dry.		
0.5		Loess		Sandy SILT, light brown, loose to tightly packed, dry. Sand fine grained		0.5
1.0		Glacial Deposits		Sandy GRAVEL with occasional cobble, light brownish grey. Tightly packed, dry. Sand medium to coarse grained. Gravels fine to coarse subrounded to rounded river gravels and laminated broken schist.		1.0
1.5				End of Pit - very hard digging		1.5
2.0						2.0
2.5						2.5
3.0						3.0
3.5						3.5

Date Excavated: 12 Decmber 2022	Equipment: 1.8T tracked excavator with 400mm tooth bucket
Logged By: PF	Contractor: Earthworks & Drainage

Geotago Ltd
Arrow Junction
Queenstown 9371
New Zealand

T: +64 272 699 736
E: pete@geotago.nz
W: www.geotago.nz

geotago
Engineering Geology & Geotechnics

Notes:

Test Pit Log

Project:	208A Lower Shotover Road	Project Number:	GL22-059
Site Location:	Speargrass Flat	Client:	Kaye Stalker
Test Pit Number:	TP103		Sheet 1 of 1

Depth (m)	Water Level	Geological Unit	Sample	Soil Rock Description	Legend	Depth
		Topsoil		Silty SAND with roots and rootlets, dark brown. Dry.		
0.5		Loess		Sandy SILT, light brown, loose to tightly packed, dry. Sand fine grained		0.5
1.0		Glacial Deposits		Sandy GRAVEL with occasional cobble, light brownish grey. Tightly packed, dry. Sand medium to coarse grained. Gravels fine to coarse subrounded to rounded river gravels and laminated broken schist.		1.0
1.5				End of Pit - Very hard digging		1.5
2.0						2.0
2.5						2.5
3.0						3.0
3.5						3.5

Date Excavated: 12 Decmber 2022	Equipment: 1.8T tracked excavator with 400mm tooth bucket
Logged By: PF	Contractor: Earthworks & Drainage

Geotago Ltd
Arrow Junction
Queenstown 9371
New Zealand

T: +64 272 699 736
E: pete@geotago.nz
W: www.geotago.nz

geotago
Engineering Geology & Geotechnics

Notes:

Test Pit Log

Project:	208A Lower Shotover Road	Project Number:	GL22-059
Site Location:	Speargrass Flat	Client:	Kaye Stalker
Test Pit Number:	TP104		Sheet 1 of 1

Depth (m)	Water Level	Geological Unit	Sample	Soil Rock Description	Legend	Depth
		Topsoil		Silty SAND with roots and rootlets, dark brown. Dry.		
0.5		Loess		Sandy SILT, light brown, loose to tightly packed, dry. Sand fine grained		0.5
1.0		Glacial Deposits		Sandy GRAVEL with occasional cobble, light brownish grey. Tightly packed, dry. Sand medium to coarse grained. Gravels fine to coarse subrounded to rounded river gravels and laminated broken schist.		1.0
1.5				End of Pit - Very hard digging		1.5
2.0						2.0
2.5						2.5
3.0						3.0
3.5						3.5

Date Excavated: 12 Decmber 2022	Equipment: 1.8T tracked excavator with 400mm tooth bucket
Logged By: PF	Contractor: Earthworks & Drainage

Geotago Ltd
Arrow Junction
Queenstown 9371
New Zealand

T: +64 272 699 736
E: pete@geotago.nz
W: www.geotago.nz

geotago
Engineering Geology & Geotechnics

Notes:

Test Pit Log

Project:	208A Lower Shotover Road	Project Number:	GL22-059
Site Location:	Speargrass Flat	Client:	Kaye Stalker
Test Pit Number:	TP105		Sheet 1 of 1

Depth (m)	Water Level	Geological Unit	Sample	Soil Rock Description	Legend	Depth
		Topsoil		Silty SAND with roots and rootlets, dark brown. Dry.		
0.5		Loess		Sandy SILT, light brown, loose to tightly packed, dry. Sand fine grained		0.5
1.0		Glacial Deposits		Sandy GRAVEL, light brownish grey. Tightly packed, dry. Sand medium to coarse grained. Gravels fine to coarse subrounded to rounded river gravels and laminated broken schist.		1.0
		Rakaia Terrane Schist		Highly to be completely weathered foliated dark blue grey SCHIST; very weak. Excavates as sandy gravel		
1.5				End of Pit - Refusal		1.5
2.0						2.0
2.5						2.5
3.0						3.0
3.5						3.5

Date Excavated: 12 Decmber 2022	Equipment: 1.8T tracked excavator with 400mm tooth bucket
Logged By: PF	Contractor: Earthworks & Drainage

Geotago Ltd
Arrow Junction
Queenstown 9371
New Zealand

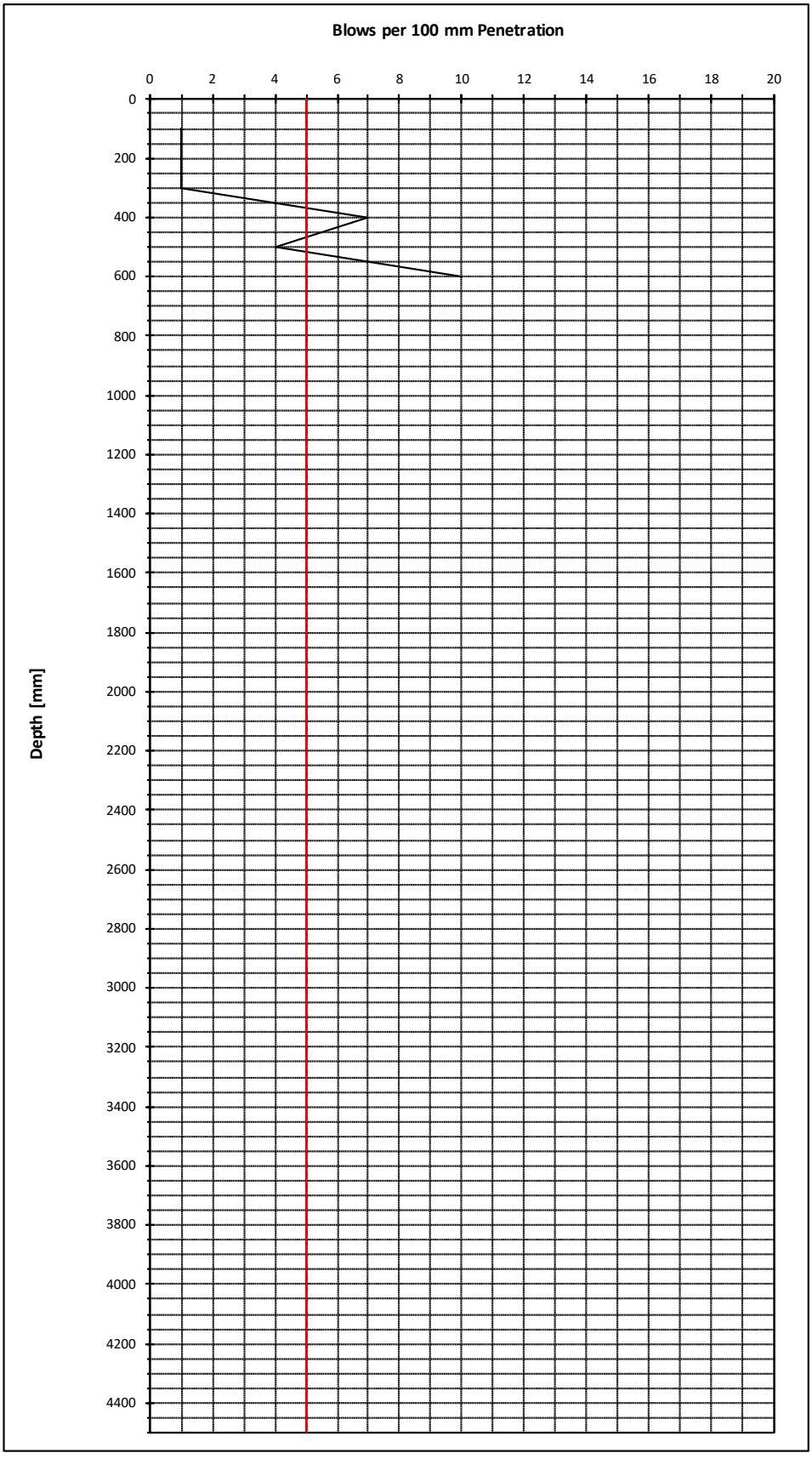
T: +64 272 699 736
E: pete@geotago.nz
W: www.geotago.nz

geotago
Engineering Geology & Geotechnics

Notes:

Notes:

Depth (mm)	Blows (no.)
100	1
200	1
300	1
400	7
500	4
600	10
700	
800	
900	
1000	
1100	
1200	
1300	
1400	
1500	
1600	
1700	
1800	
1900	
2000	
2100	
2200	
2300	
2400	
2500	
2600	
2700	
2800	
2900	
3000	
3100	
3200	
3300	
3400	
3500	
3600	
3700	
3800	
3900	
4000	
4100	
4200	
4300	
4400	
4500	
4600	
4700	
4800	
4900	
5000	
5100	
5200	



New Zealand Standard NZS 4402:1988
Test 6.5.2

Geotago Ltd
Arrow Junction
Queenstown 9371
New Zealand

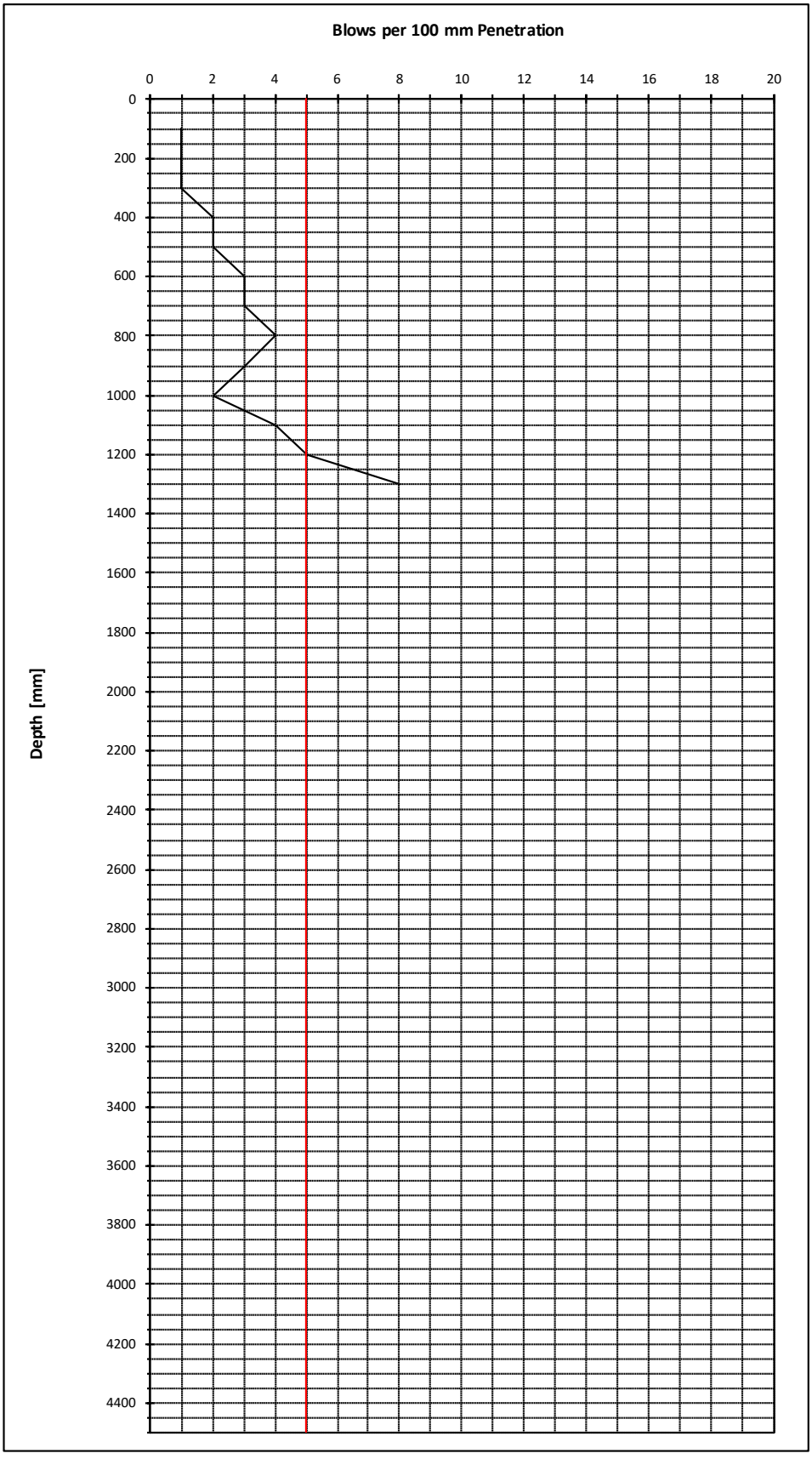
T: +64 272 699 736
E: pete@geotago.nz
W: www.geotago.nz

geotago
Engineering Geology & Geotechnics

Client: KAYE STALKER		SCALA PROBE	
Location: 208A LOWER SHOTOVER ROAD		No: SPT 104	
Tester: PETER FORREST	Date: 12/12/22	Job Number: GL22-059.1	Rev: 1

Notes:

Depth (mm)	Blows (no.)
100	1
200	1
300	1
400	2
500	2
600	3
700	3
800	4
900	3
1000	2
1100	4
1200	5
1300	8
1400	
1500	
1600	
1700	
1800	
1900	
2000	
2100	
2200	
2300	
2400	
2500	
2600	
2700	
2800	
2900	
3000	
3100	
3200	
3300	
3400	
3500	
3600	
3700	
3800	
3900	
4000	
4100	
4200	
4300	
4400	
4500	
4600	
4700	
4800	
4900	
5000	
5100	
5200	



New Zealand Standard NZS 4402:1988
Test 6.5.2

Geotago Ltd
Arrow Junction
Queenstown 9371
New Zealand

T: +64 272 699 736
E: pete@geotago.nz
W: www.geotago.nz

geotago
Engineering Geology & Geotechnics

Client: **KAYE STALKER**		SCALA PROBE	
Location: **208A LOWER SHOTOVER ROAD**		No: **SPT 105**	
Tester: **PETER FORREST**	Date: **12/12/22**	Job Number: **GL22-059.1**	Rev: **1**

Appendix C – Soakage Test

SOAKAGE TEST **TP101**

1. PROJECT DETAILS

Project:	**GL22-059**
Property:	**208A Lower Shotover Road**
Date:	**12-Dec-22**
Calc's by:	**PF**

LEGEND

Inputed parameters
Calculated parameters

2. SOAKAGE TEST DETAILS

Test water volume	=	**500**	L
Start fill time	=	**14:18:00**	h:m:s
Fill duration	=	**02:21**	h:m:s
Stop fill time	=	**14:20:21**	h:m:s
Pit empty time (est)	=	**16:04:21**	h:m:s
Pit empty duration (est)	=	**01:44:00**	h:m:s
Pit Depth at measure	=	**140**	cm
Depth to surface of test	=	**11**	cm

SOAKAGE TEST SUMMARY

Percolation rate = 1201.92 mm/hr

QLDC rate = 601 mm/hr

3. SOAKAGE TEST

Time	Duration (mins)	Period (T)	Water Drop from GL (cm)	Water Column Depth (mm)
14:20:21	0	0	0	0
14:21:21	1	1	13.00	1270.00
14:22:21	1	2	15.00	1250.00
14:23:21	1	3	18.00	1220.00
14:24:21	1	4	20.00	1200.00
14:25:21	1	5	22.00	1180.00
14:30:21	5	10	29.00	1110.00
14:35:21	5	15	37.00	1030.00
14:58:21	23	38	62.00	780.00
15:12:21	14	52	75.00	650.00

4. SOAKAGE TEST CALCULATIONS

Pit width	=	0.4	m
Pit length	=	1	m
Total pit area	=	0.4	m²
Effective basal test area	=	60	%
Calc. basal test area	=	**0.24**	**m²**
Test volume	=	500	L
Fill duration	=	00:02:21	h:m:s
Discharge rate	=	213	L/min
Pit empty duration	=	104	minutes
Percolation rate	=	**1201.92**	**mm/hr**

NOTES

Moderate Draining Soil. Contamination from silt material in upper soil profile.

Appendix D - Site & Soils Assessment

Onsite Wastewater Disposal Site & Soils Assessment

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: Kaye Stalker

Location Address: 208A Lower Shotover Road, Speargrass Flat,, Queenstown

Legal Description (eg Lot3 DP1234) : Lot 2 being a subdivision of Lot 1 DP 304273

List any existing consents related to waste disposal on the site: RM060005 and variations thereof

General description of development / source of waste water:

Rural residential - Subdivision to form two lots 1 and 2 (with Lot 1 occupied by the existing dwelling)

The number and size of the lots being created: Two Lots at 2.99ha (Lot 1 existing dwelling) and 0.33 ha for new Lot (Lot 2)

Site Assessment (refer to Tables R1 & R2 for setback distances to site features)

Land use: Rural lifestyle

Topography: Lot 2 is on sloping topography, varying from gentle to moderate gradients

Slope angle: Slopes < 10 degrees in areas for EDA

Aspect: North to north westerly

Vegetation cover: Grass

Areas of potential ponding: No

Ephemeral streams: None

Drainage patterns and overland paths

Drainage running south east to north west emanating from higher ground in the southeast. Very limited catchment. No topographical or morphological expressions of overland flow or drainage pathways.

Flood potential (show with return period on site plan): None

Distance to nearest water body: >500m

Water bores with 50m (reference ORC Maps): None

Other Site Features: Loess soils forming low permeability capping to moderate draining gravels below site. Rock head relatively shallow

Slope stability assessment details – summarise any areas unsuitable for waste water irrigation. (Attach report if applicable):

No stability issues on site

(Highest potential) Depth to ground water:

Summer >10m

Winter >10m

Information Source Based on interpretation of site investigation

What is the potential for waste water to short circuit through permeable soils to surface and / or ground water?

Nil to low.

Soil Investigation (Appendix C)

Field investigation date: 12 December 2022

Number of test pit bores (C3.5.4): Total of five test pits across the site

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 on site

Average depth of topsoil: 200mm

Indicative permeability (Appendix G) : 0.06-0.12 m/d (Table L1, Class 4 Soils)

Percolation test method (refer to B6 for applicability) :
(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	x
5	Light clays	Moderate to slow	
6	Medium to heavy clays	Slow	

Reasons for placing in stated category:

Soil logging of test pits. Presence of silts and fine sands (loess) to 700mm above free draining gravels will provide some attenuation within the upper soil matrix of the gravels.

Loading rate, DLR (Table L1): DLR for beds = 10mm/d. DIR for drip irrigation = 3.5mm/d

Explanation for proposed loading rate:

Class 4 Soils (tight massive sandy silt - Application of secondary treatment effluent

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

Use of secondary treated effluent

Use in ground irrigation or discharge bed or trenches

Soil category based on the underlying Loess and not the sandy gravels

Attachments Checklist

	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:	Geotago Ltd
Email:	pete@geotago.nz
Phone number:	0272 699 736
Name:	Dr Peter Forrest
Signature:	
Date:	12 December 2022

Appendix E - Site Photographs

Test Pit 101 - Pit 	Test Pit 101 - Arisings 
Test Pit 102 – Pit 	Test Pit 102 - Arisings 
Test Pit 103 - Pit 	Test Pit 103 - Arisings 

Test Pit 104 - Pit 	Test Pit 104 - Arisings 
Test Pit 105 - Pit 	Test Pit 105 - Arisings 

16 December 2022

Kaye Stalker
Email: mck@xtra.co.nz

Dear Kaye

Hawthorn Water Limited – Potable water supply

I confirm that a connection to and allocation from Hawthorn Water Limited's potable water supply scheme is available for the purposes of your proposed subdivision at 208a Lower Shotover Road to create a new rural lifestyle lot.

The connection will provide a potable water supply of 2,000 litres per day from the Hawthorn Water Limited potable water supply scheme.

Warwick Goldsmith
Director, Hawthorn Water Limited

Environmental Management Plan (Rev B)

208A Lower Shotover Road

March 2023

Document Control	
Title	208A Lower Shotover Road - Environmental Management Plan
Address	208A Lower Shotover Road, Queenstown
Consent Number	RM221142
Client	Kaye Stalker
Our Reference	23009
Prepared by	**Caitlin Dalziel** (BSc) Environmental Consultant
Reviewed by	**Quinn McIntyre** (MSc, CEnvP) Principal Environmental Consultant

Document Control			
Revision	Revision Date	Revision Details	Prepared by
A	20.02.2023	For Client	CD
B	31.03.2023	Updates in response to reviewer comments.	CD

Table of Contents

Appendices	
Appendix 1	Erosion and Sediment Control Plan Drawings
Appendix 2	Calculations for Erosion and Sediment Controls
Appendix 3	Environmental Site Induction Handout
Appendix 4	Environmental Site Induction Register
Appendix 5	Weekly Environmental Site Inspection Form
Appendix 6	Environmental Incident Form
Appendix 7	Environmental Complaints Register
Appendix 8	Environmental Management Plan Non-Conformance Register
Appendix 9	Water Quality Monitoring Results Form
Appendix 10	Archaeological Discovery Protocol

Disclaimer

Enviroscope has exercised due skill, care, and attention in preparing this EMP on the basis of their understanding of the subject site through their own site visits as well as information provided by the client and its consultants. Enviroscope has no control over the physical actions, detailed design, equipment, services, and methodologies undertaken by the client or other third parties tasked with implementing Enviroscope's instructions or recommendations. Enviroscope does not accept any responsibility for any environmental incidents or other defects of control measures if there is any departure or variance from the measures detailed in this EMP and any supporting documentation.

Emergency Contacts

Contact made with any of the following shall be undertaken with due consultation of the Environmental Representative or Project Manager.

Element	Emergency Contact	Details
Pollution incident	Otago Regional Council (ORC) Spill Hotline	0800 800 033 compliance@orc.govt.nz
Environmental complaint	Environmental Representative	TBC
Discovery of contaminated land	Environmental Representative	
Unexpected heritage finds	Environmental Representative	
Human remains	New Zealand Police	111
Fire including bushfire	Fire and Emergency New Zealand (FENZ)	111
Public utilities	Queenstown Lakes District Council (QLDC)	(03) 441 0499 rcmonitoring@qldc.govt.nz
Internal contacts	Project Manager	TBC
Internal contacts	Environmental Consultant	Caitlin Dalziel 021 0850 6118

1.0 INTRODUCTION

1.1 Purpose and Scope

On behalf of Kaye Stalker, Enviroscope has prepared this Environmental Management Plan (EMP) to outline management measures for potential environmental effects associated with earthworks to form landscape mounds, a building platform and a driveway at 208A Lower Shotover Road, Queenstown. This EMP aims to reduce the effects of the Project's construction activities on the environment and sensitive receptors.

This EMP is prepared according to the Queenstown Lakes District Council (QLDC) *QLDC Guidelines for Environmental Management Plans*, *June 2019* (EMP Guidelines) and is considered to have a 'Medium' environmental risk level as per the risk categories outlined in the EMP Guidelines.

This EMP also provides a commitment to conforming to applicable environmental legislation (i.e., the *Resource Management Act, 1991* and relevant National Environmental Standards), regional and district planning documents and associated guidelines and standards along with continual improvement in environmental performance.

The purpose of this EMP is to be an effective and practical reference manual for construction personnel that applies to all Project activities during the construction phase and includes the following:

- Identification of significant aspects and environmental risks.
- Strategies to manage environmental aspects and risks.
- Includes all mitigation measures committed to in the associated Resource Consents and the associated best practice Environmental Management Plan Guidelines and or standards.
- Including a series of environmental operating procedures for each environmental element according to Council requirements.
- Provides for contingency planning.
- Provides a framework for monitoring, reporting, review and continual improvement.
- Defines roles and responsibilities.
- Includes procedures for investigating and resolving environmental non-conformances and initiating corrective and preventative actions.

1.2 Site Overview

208A Lower Shotover Road is a 3.33 ha lot, accessed on its western boundary via a 400 m metalled driveway. This is shown in **Figure 1** below. The site is relatively elevated above the surrounding properties, with undulating topography and a fall from south-east to north-west.

The proposed earthworks are to occur in the south-western corner of the site, approximately 50 m from the existing residential dwelling and accessory buildings. The driveway to the existing dwelling has mature trees planted on either side. The majority of the remaining property is covered with exotic grass.

GeoOtago completed a geotechnical investigation of the site in December 2022. This report identified the soil stratigraphy on site as topsoil overlying loess and glacial till beginning from 0.6 to 1.5 m. The glacial till contains sandy gravel. Soakage testing concluded that the site has moderate soakage at a rate of 601 mm/hr.

There are no waterways or flow paths within the proposed earthworks area. The neighbouring properties to the north, west and southwest contain residential dwellings, the nearest being 25 m west. The property to the east is rural pasture.

Figure 1: Location of the site with proposed earthworks (red) (Source: QLDC GIS)**.**

1.3 Project Overview

The scope for construction works generally involves:

- Installation of erosion and sediment controls.
- Earthworks (cut & fill) to form landscaping mounds, building platform and driveway.
- Installation of service infrastructure.
- Construction of buildings and driveway.
- Landscaping.
- Final reshaping of levels and rehabilitation of disturbed areas.
- Decommissioning of erosion and sediment controls.

1.4 EMP Updates

The EMP will be regularly reviewed through ongoing monitoring of the site. Review will ensure the document remains fit for purpose and drive continual improvement of environmental management. Changes to the EMP may be implemented because of the following:

- Significant changes to the construction methodology.

- To respond to improvements identified as a result of an Environmental Incident, management failure or corrective action.
- Where directed by QLDC's Monitoring and Enforcement team.

All updates to the EMP will be managed through document control procedures as recorded on page one and shall be submitted to QLDC for acceptance.

1.5 Associated Resource Consents

This EMP has been prepared to ensure that all relevant requirements and environmental condition consents are addressed. Provided the project undertakes its operations in accordance with this EMP it will comply with the relevant environmental conditions of their resource consent. The resource consent associated with this project is given in **Table 1**.

Table 1: Associated resource consents

Resource Consent Number	Related Council	Activity Description	Date of Decision Issue
RM221142	QLDC	Undertake a two-lot subdivision and associated earthworks.	TBC

1.6 Suitably Qualified and Experienced Professional

This report has been prepared by Caitlin Dalziel of Enviroscope Limited. Caitlin has a Bachelor of Science in Environmental Science and Biological Sciences from the University of Canterbury. She is experienced in resource and environmental management, environmental quality in urban environments, contaminated land management, ecology and microbiology.

This EMP has been reviewed by Quinn McIntyre of Enviroscope Limited. Quinn is a Certified Environmental Practitioner (CEnvP) which meets the qualifications criteria required by the EMP Guidelines. Quinn has worked in various environmental roles on a range of construction projects, including bulk earthworks in New Zealand and Australia. His previous environmental roles included management of all environmental elements including erosion and sediment control and ongoing environmental monitoring and auditing.

2.0 CONSTRUCTION METHODOLOGY

2.1 Sequencing of Works

Construction will be undertaken according to the following steps which will ensure that the Project is constructed as efficiently as possible whilst achieving the environmental objectives outlined in this EMP. The sequencing order has been selected to ensure the earthworks undertaken onsite do not cause adverse environmental effects. This is a preliminary staging methodology and may be subject to change based on the site's conditions and performance during construction.

This methodology shall be read in conjunction with the Erosion and Sediment Control Plan (ESCP) attached as **Appendix 1**.

Preliminary works and site establishment

- Print off or have an online version of the current EMP available on-site.
- Complete site induction with Environmental Representative.
- Establish site laydown.
- Construct stabilised access.
- Construct Sediment Basin.
- Construct dirty water diversion channels.

Bulk earthworks and construction

- Complete cut and fill earthworks to form building platform, landscaping mounds and driveway. Once complete topsoil and revegetate the fill batter to reduce the extent of exposed soil.
- Construct residential dwelling and services including soak pit, effluent disposal area and septic tank.

Landscaping and revegetation

- Undertake final landscaping and revegetation of any remaining exposed areas.

Decommissioning

- Remove erosion and sediment control devices once stabilisation has occurred across the entire site (i.e., 80% vegetative cover). Revegetate any exposed areas.

2.2 Hours of Operation

Construction activities and the associated hours of operation shall comply with *NZS 6803:1999 Acoustics - Construction Noise Guidelines*.

Monday to Saturday, site works may be undertaken between 0730 and 1800 hours. Set up and prestart checks may begin at 0730 hours. No works are to be undertaken on Sundays or Public Holidays. However, this does not preclude any emergency works or works required for incident investigation or response. Additional detail relating to noise-producing activities are to be undertaken in accordance with Section 7 of this EMP.

3.0 EMP IMPLEMENTATION

3.1 Environmental Roles and Responsibilities

Table 2: Environmental roles and responsibilities

Role	Responsibilities
Project Manager TBC	The Project Manager is responsible for the effective implementation of the EMP and overall responsibility for the environmental performance of the project. • Ensuring adequate resources are in place to implement the EMP. • Ensuring that project objectives and targets are achieved in accordance with the relevant EMP. • Ensuring Project Managers, Employees and Sub-Contractors operate within the guidelines of the EMP. • Ensuring that an EMP is prepared and that environmental standards, processes and procedures meet relevant resource consent conditions. • Overseeing the successful implementation, monitoring and review of the EMP. • Providing reporting of environmental incidents to the QLDC and other periodic environmental reports to QLDC as required by the EMP Guidelines. • Ensuring that inspections and audits are carried out in accordance with the relevant EMP. • Restrict or stop any activity on the Project that has the potential to or has caused environmental effects. • Delegate authority of the above responsibilities.

Environmental Representative
 	
TBC
	The Environmental Representative is accountable to the Project Manager and supports the Project Manager in the day-to-day implementation of the EMP.
	
	• Ensure installation of environmental controls as per the EMP.
	• Undertake environmental site inspections including weekly inspections of controls.
	• Oversee the maintenance and improvement of defective environmental controls.
	• Keep project leadership informed of the environmental performance of the project.
	• Inform staff of procedures and constraints applicable to managing specific environmental issues.
	• Responsible for providing environmental inductions to all staff and sub-contractors.
	• Assist the project leadership in attending to Environmental Incidents and Complaints.
	• The Environmental Representative shall be familiar with:
	  - Environmental aspects of the project.
	  - Environmental Management Plan.
	  - Best practice erosion and sediment control from:
	  ○ *Guidance Document 2016/005: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05)

Role	Responsibilities
Environmental Consultant Caitlin Dalziel Enviroscope	Caitlin will oversee the environmental management of the site and provide technical environmental management advice as and when required.
All staff and sub-contractors	All Project staff have responsibility for their environmental performance and the impact they have on Project environmental performance. All subcontractor personnel are considered equivalent to staff personnel. All staff are required to: • Undertake all activities in accordance with the requirements of the EMP. • Ensure they are aware of the contact person related to environmental matters. • Report to the Environmental Representative, any activity that has the potential to or has resulted in an Environmental Incident.

3.2 Site Environmental Induction

All staff and subcontractors shall attend a site environmental induction to ensure they are aware of their environmental responsibilities. The Environmental Representative will deliver the induction to core staff prior to ground-disturbing activities. During the project, the Environmental Representative will induct sub-contractors and new staff.

The site induction handout is attached as **Appendix 3**. The Project shall maintain a register of all persons inducted, this is attached as **Appendix 4**.

3.3 Environmental Inspections

Regular environmental inspections shall be undertaken of the site to confirm that the environmental management of the site can prevent the environmental effects of the construction activity. Details of the specific environmental inspections to be undertaken by the Environmental Representative are outlined in **Table 3**.

Table 3: Environmental inspections

Environmental Inspection	Timing	Purpose
Weekly Inspection	Every seven days	A comprehensive environmental inspection of the site to verify that: - The management measures prescribed in the EMP for all environmental elements are present, functional, and adequate. - Identify any activities that may cause an environmental incident or actual or potential environmental effects. - Identify maintenance requirements for implemented management measures. All weekly inspections shall be recorded on the Weekly Site Inspection form (attached as **Appendix 5**).
Pre-Event Inspection	Prior to the significant rain event[1]	To ensure that erosion and sediment controls are present, functional, and adequate to perform in the upcoming event based on the forecast accumulation of rainfall. This inspection will inform any preventative work required prior to the event and may also result in an escalation of the Rapid Response Procedure (see Section 4.5). Observations and remediation measures taken will be recorded in a daily job diary.
Rain Event Monitoring	During a significant rain event	To ensure that: • Erosion and sediment control devices continue to function correctly and inform any necessary emergency responses. • Sediment retention devices are functioning effectively and have capacity available. • No errant stormwater is crossing the boundary of the site. Observations and remediation measures taken will be recorded in a daily job diary.
Post-Event Inspection	Immediately following a significant rain event	Any observations and corrective actions should be recorded in a daily job diary.

[1] For the purposes of this EMP a significant rain event is defined as any rain event that can generate overland flow.

3.4 Environmental Incident Management

Environmental incidents shall be responded to immediately as the Project team becomes aware of them. Environmental incident response shall involve:

- Immediate cessation of the activity that caused the incident.
- Investigation into the cause of the incident.
- Contact Environmental Consultant for advice where site staff are unsure of how to correct the issue (to be engaged by the Project Manager).
- Initial response to bring the incident under control or remediate any environmental damage.
- Implement any remediation works.

The Project Manager shall notify QLDC of the details of any Environmental Incident within 12 hours of becoming aware of the incident. Notification will be through a phone call to Council Monitoring staff (see Emergency Contacts on page six).

The Project Team shall provide an Environmental Incident Report within ten working days of the incident occurring. The Incident Report form is attached as **Appendix 6**.

3.5 Records and Registers

The records listed below will be collated on site. If a request is made by a QLDC official, the records shall be made available to the official within 24 hours of the request being made.

- Environmental Induction attendance register.
- Environmental Incident reports and associated corrective actions undertaken.
- Complaints register and associated corrective actions undertaken.
- Post-Rain event inspection observations and corrective actions.
- Weekly Site Inspection checklists.
- Monitoring results (e.g., water quality).
- EMP Non-conformance register (based on weekly inspection results or otherwise identified) and associated corrective actions taken.

The Project Manager will manage all records in an organised central location. The Environmental Representative will upload and amend the records as inspections, monitoring, corrective actions or other are completed.

3.6 Complaints Procedure

Kaye Stalker aims to conduct their business activities professionally with minimal to no impact on others not directly involved with the works being undertaken.

If a complaint is lodged directly or indirectly, the complaint is to be recorded and an investigation is to be carried out. Upon notification the Project Manager is to be informed of the complaint. The complainant will be provided with a response acknowledging receipt of the complaint and outlining proposed controls that are to be implemented. After the investigation, all corrective actions are to be closed out and a follow-up of the original complaint is to be conducted to ensure the actions implemented have been effective.

Any complaint when investigated was found to be warranted shall be recorded as an environmental incident and shall be managed in accordance with the procedure outlined in Section 3.4 above. All complaints will be recorded on the Complaints Register attached as **Appendix 7**.

3.7 EMP Non-Conformance and Corrective Actions

Any EMP non-conformances found during site inspections, monitoring or as a result of incidents or complaints shall be recorded in the EMP Non-Conformance Register. The non-conformance register attached as **Appendix 8** will detail when corrective actions are due, how they are to be carried out and the close out date.

The non-conformance register ensures that issues do not escalate or are missed, as well as, providing a clear record of evidence that can be used to defend any potential complaint or formal enforcement action.

4.0 EROSION AND SEDIMENT CONTROL MEASURES

4.1 Performance Criteria

Design, install and maintain erosion and sediment controls in accordance with industry best practices. Generally, *Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016* (Auckland Council Guideline Document GD2016/005).

4.2 Erosion and Sediment Control Principles

Erosion and sediment control ('ESC') devices shall be installed, maintained and decommissioned in accordance with the following principles:

- Erosion and sediment controls are integrated with construction planning.
- A 'treatment train' approach so that the sediment retention devices operate as efficiently and effectively as possible.
- Separation of 'clean' and 'dirty' water with clean water to be diverted around the site to minimise the volume of dirty water needing management onsite.
- The extent and duration of soil exposure is minimised.
- Controls are always maintained in proper working order.
- Progressively stabilise and revegetate disturbed or completed areas.
- The site is monitored, and erosion and sediment control practices are adjusted to maintain the required performance standard.
- Soil erosion is minimised as far as reasonable and practical.
- Avoidance of sediment discharge off-site and protection of receiving environments.

4.3 Guidance on Erosion and Sediment Control Devices

The effective control of surface water shall be achieved through the utilisation of carefully selected erosion and sediment control devices to achieve a specific purpose. These guidelines for the devices employed on this project shall be read in conjunction with the ESCP attached as **Appendix 1** of this document.

Erosion and sediment control measures shall be installed in general accordance with *Guidance Document 2016/005: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05).

4.3.1 Stabilised Entranceway

The stabilised access will be located off the existing driveway that extends through the site. The specific location is indicated on ESCP-001 attached as **Appendix 1**. The stabilised entranceway will be constructed in accordance with the schematic diagram in ESCP-002, **Appendix 1** (complete guidelines on pages 60-65 of GD05).

4.3.2 "Clean Water" Diversion Channels

No clean water diversion channel will be constructed as part of this project as the contributing clean water catchment is relatively small. The contributing catchment, which also extends over the southern boundary has been included in the calculations for sediment retention devices on site. This catchment is depicted on the inset of ESCP-001 in **Appendix 1**.

4.3.3 "Dirty Water" Diversion Channels

The natural fall of the site is from south-east to north-west. Therefore, dirty water diversion channels (DWDC) will be installed along the northern and western boundaries to capture and carry sediment-laden stormwater to the Sediment Basin. This is depicted in **Figure 2** below. DWDCs will be constructed in accordance with the schematic diagram in ESCP-003, **Appendix 1** (complete guidelines on pages 43-46 of GD05). Full calculations are included in **Appendix 2**.

Figure 2: Overview of site.

4.3.4 Check Dams

Rock check dams will be deployed primarily to reduce the velocity of concentrated flows in the DWDCs. They will also act to capture some coarse sediment. The check dams will be constructed in accordance with the schematic diagram in ESCP-004, **Appendix 1** (complete guidelines on pages 50-54 of GD05).

4.3.5 Sediment Basin

A sediment basin will capture and retain sediment-laden water from the 3,800 m^2 contributing catchment, allowing it to soak away. Alternatively, once the surface water has met water discharge standards it can be pumped out of

the retention area via the existing flow path to the north-east. The direction of the existing flow path will also be the location of the emergency spillway which is shown in ESCP-001, **Appendix 1**.

The expected stormwater volume of 73 m^3 has been calculated using a 1-hr, 5% AEP design event and a conservative run off coefficient of one. It is likely that the volume reaching the basin will be less than 73 m^3 as the runoff coefficient of the catchment will be less than one given the rank grass surface. The soakage rate of 601 mm/hr, calculated in the in the geotechnical report prepared by GeoOtago has been used to determine the soakage rate of the basin. Given this soakage rate, the 17 m W x 7.5 m L x 0.5 m D sediment basin is sufficiently sized for the design event and exposed area. This is demonstrated alongside design specifications in **Appendix 1**, ESCP-005. Full calculations are included as **Appendix 2**.

The sediment basin will need to be mucked out periodically to ensure that sediment can continue drain through the basin floor.

If it is determined that additional storage is necessary based on monitoring and observations by the Environmental Representative, the depth of the basin can be excavated further to provide additional volume.

4.3.6 Temporary Stockpiles

Stockpiles may be formed as part of earthworks. It is recognised that the location of stockpiles will change with the progress of the earthworks. Stockpiles shall be constructed in accordance with the schematic diagram in ESCP-003, **Appendix 1.**

4.3.7 Progressive Rehabilitation

To minimise the area of exposed soil and thus dirty water generation, progressively stabilise earthworks as they are finished, in particular the batter of the fill area in the west of the site. Prior to final landscaping, this can comprise temporary grassing, turfing or clean aggregate.

4.4 Maintenance of Erosion and Sediment Control Devices

Ongoing maintenance of the site shall be undertaken according to the ESCP as follows:

- Clean out sediment of all erosion and sediment control devices (e.g., out of the sediment basin) as soon as 20% capacity has been reached and prior to any forecast rain event.
- Any mucked-out sediment shall be stockpiled, dried and reused as planting media for revegetation.

4.5 Rapid Response Procedure for Significant Rain Events

The Environmental Representative will ensure that forecast weather is observed and always understood. If a significant rain event is forecast, all works will cease in sufficient time for site staff to inspect erosion and sediment control devices and undertake any maintenance or upgrading necessary to stabilise the site. Observations will continue through the rain event to ensure the functioning of erosion and sediment control devices, in particular the function and capacity of the Sediment Basin.

4.6 Decommissioning and Removal

Erosion and sediment control devices will remain in place until 'stabilisation' of the site has been achieved. Stabilisation is defined as vegetative cover (i.e., grass) reaching 80% coverage across the site (refer to **Figure 3** below). Decommissioning will be undertaken in consultation with the SQEP.

It is noted that some controls such as dirty water diversion channels shall be removed (or spread out carefully) which will result in exposed soil. Any soils exposed during decommissioning will be stabilised with either grass, mulch or other appropriate erosion control.

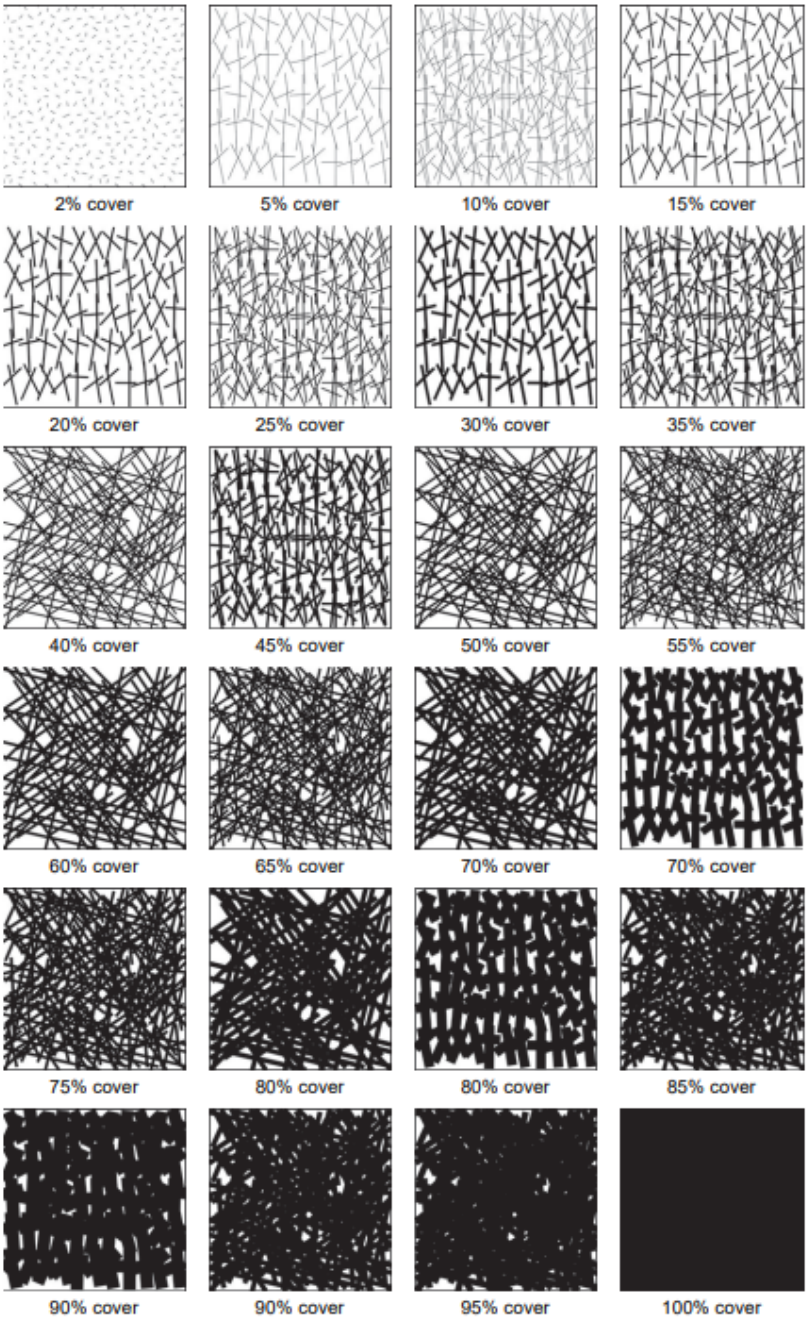


Figure 3: Visual cover estimation (Source: Catchments and Creeks Pty Ltd)

4.7 Inspections and Monitoring

There are several types of inspections and monitoring to be undertaken throughout the construction project to ensure that the Project understands the site's level of exposure at critical times. Details of requirements are stated in Section 3.3 of this EMP.

4.8 Contingency Measures

The following contingency measures in **Table 4** shall be deployed as required.

Table 4: Erosion and sediment control contingency measures

Issue	Contingency Measure
Abatement notice issued by QLDC due to sediment run-off offsite or at-risk erosion and sediment control measures prevent onsite	Contact the Environmental Consultant (SQEP) immediately. Meet the requirements of the abatement notice by stabilising the site in accordance with the latest ESCP or an updated ESCP (where required) within the time stated by the abatement notice. The notice will state the maximum penalty which will be applied should the conditions of the notice not be met within the specified period.
Sediment-laden stormwater runs across the boundary of the site	Undertake measures to stop the flow immediately. Ensure controls are installed according to the ESCP. Contact the Environmental Consultant (SQEP) who will initiate the incident response.
Controls do not appear to be working as intended in the EMP/ESCP	Contact Environmental Consultant (SQEP) to inspect and request a revision to ESCP.
The site is found to be inappropriately exposed prior to an oncoming rain event	All works are to cease, and effort shall be moved to checking erosion and sediment control stabilisation through the Rapid Response Procedure outlined above in Section 4.5.
Sediment retention devices are near capacity and more rain is forecast	Contact the Environmental Consultant (SQEP) immediately for advice.

4.9 Erosion and Sediment Control Incident

An erosion or sediment control incident is considered to have occurred where the performance criteria outlined in Section 4.1 is not met. The incident procedures outlined in Section 3.4 shall be followed.

5.0 WATER QUALITY MANAGEMENT

Surface water bodies (rivers, streams, lakes and wetlands) provide important habitats for many species of plants, fish, birds and animals, some of which are endemic and/or threatened.

To protect these values, water quality must be safeguarded, and the natural flow of the watercourse maintained to the greatest possible extent. Where flow must be reduced or diverted, mitigation is required to ensure the values of the watercourse are not degraded.

5.1 Sensitive Receptors

There are no waterways to flow paths within the proposed earthworks area. To the south of the site the Arrow Water Race, cuts off upslope clean water flows. Other water features in proximity to the site include a landscaping pond on the neighbouring property to the west and a wetland area in the gully to the east. Due to natural topography, flows from the works area cannot enter these three features as shown in **Figure 4**.

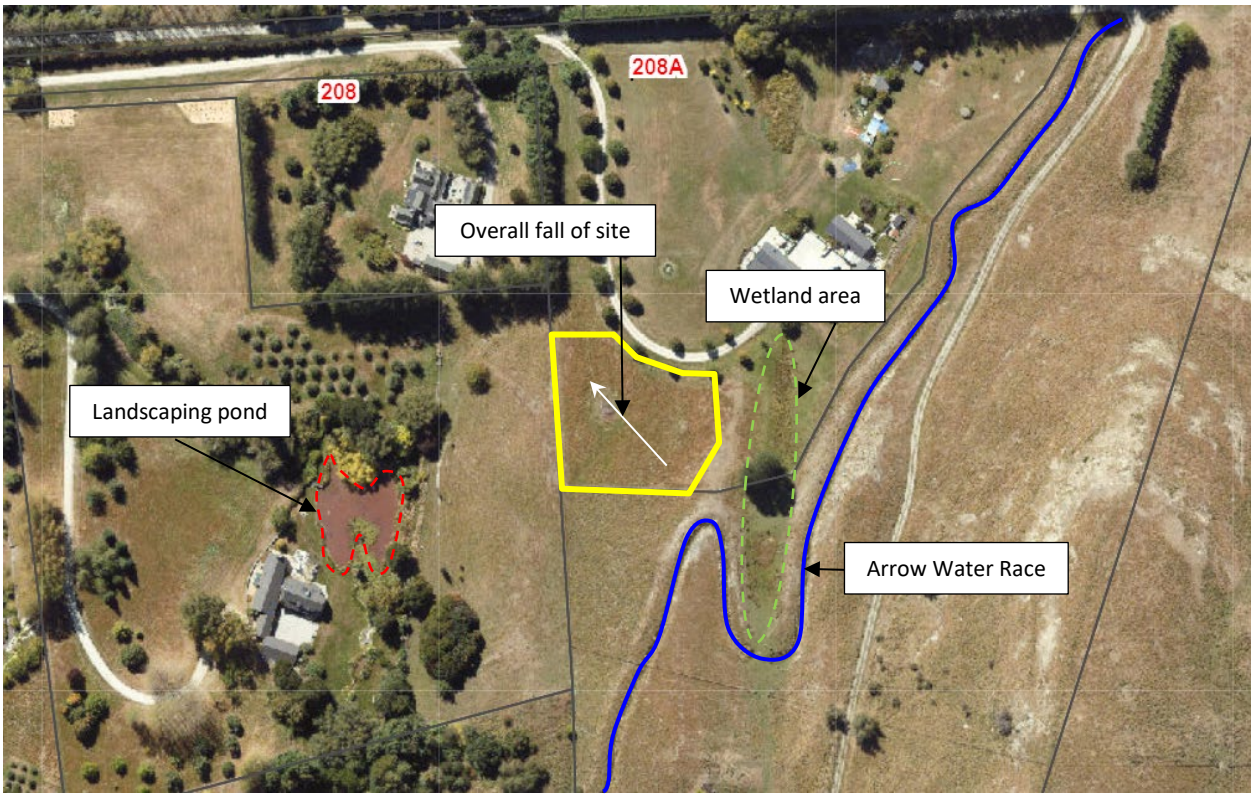


Figure 4: Waterways within and in proximity to the site

5.2 Performance Criteria

1. Waters released from the site will meet conditions of relevant resource consents and comply with requirements of The Otago Regional Council Water Plan and QLDC Guidelines.
2. Any waters discharging the site boundaries will meet the criteria in **Table 5**.

Table 5: Water quality discharge criteria

Parameter	Discharge Criteria
Turbidity	≤ 100 NTU[2]
And/or, if turbidity is exceeded test for…	
Total Suspended Sediments (TSS)	≤ 50 mg/L
Hydrocarbons or tannins	No visible trace
Waste	No waste or litter is visible

5.3 Management Measures

The following measures will be deployed to ensure the protection of water quality:

- Sedimentation and erosion controls will be implemented and maintained in accordance with the Erosion and Sediment Control section.
- Refuelling, servicing and storage of petrochemicals will be in accordance with the relevant procedures in the Fuels and Chemicals section.
- Washdown pits will be provided for wash down of concrete truck chutes or mixers or concrete wash out will occur at an approved off site facility.
- All plant and equipment on site will be inspected weekly to ensure they are of an acceptable standard. The Environmental Representative will periodically audit the compliance with plant check procedures.
- Stockpiling of any organic, erodible or hazardous material on site is not to be placed within close proximity of a watercourse/major drainage line, unless appropriate controls are in place.

5.4 Monitoring

Water quality on site should be monitored in accordance with **Table 6**.

[2] Turbidity will be expressed in Nephelometric Turbidity Units (NTU) as a nephelometer provides an instant onsite NTU reading. The alternative, a Total Suspended Solids measure requires laboratory testing which can take several days. If the specified NTU value is not met, a water sample will be collected and sent for TSS laboratory testing.

Table 6: Water quality monitoring measures

Sampling Scope	
Objective	Water quality monitoring will be undertaken to confirm that all controlled and uncontrolled stormwater discharged from the site meets the water quality criteria referred to in Section 5.2.
Spatial boundaries	This monitoring program is designed to monitor the accumulated discharge of all water that enters the site from rainfall or overland/channel flow.
Frequency	At the time water flows cross the boundary of the site. Where a Significant Rain Event occurs through the night, monitoring shall be undertaken the following morning. Weekly Environmental Inspections will also undertake visual monitoring of sediment retention devices and waterbodies within the site.
Sampling Design	
Water Quality Criteria	The parameters of turbidity (and TSS if required), gross pollutants (waste/litter), tannins and oils and petrochemicals.
Sampling Locations	At boundaries of the site where any water is flowing.
Sampling Method	• TSS – A representative sample to be taken from control outlet or boundary and sent to a registered laboratory for testing. • Turbidity (NTU) – Nephelometer • Gross pollutants – visual observations (is there any litter present?) • Tannins – visual observations (is there any unusual yellowing or darkening of waters?) • Oils/Petrochemicals – visual observations (is there any oily film[3] on surface or smell?)
Quality Control	Any water quality meter will be calibrated according to manufacturer instructions. All observations will be recorded and analysed.
Recording	

[3] Note that some bacteria produce a naturally occurring film on the surface. The way to tell the difference between hydrocarbons is that the bacteria films breaks apart on the water surface in blocky and angular shapes whereas hydrocarbon film separates as globules.

Recording Results	All results will be entered into a spreadsheet and kept onsite (form attached as **Appendix 9**).
Actions	
Non-conformances	Any exceedances observed in monitoring data will be reported to the Project Manager who will ensure that the matter is investigated, and corrective actions are implemented immediately.

5.5 Contingency Measures

The following contingency measures in **Table 7** shall be adopted if required.

Table 7: Water quality contingency measures

Issue	Contingency Measure
Exceedance of water quality criteria	Should the occurrence constitute exceedance of the water quality criteria: • Contact the Environmental Consultant (SQEP) immediately. • Work in the area will cease or be modified to remove further risk of contamination. • The Project Manager, ORC and QLDC, will be verbally notified pending more detailed analysis and written confirmation. • An Environmental Incident will be raised, and a detailed investigation commenced by the Environmental Consultant (SQEP) to determine the cause of the problem and necessary remedial measures to prevent its recurrence. • When determined, remedial measures will be implemented and the Incident closed out by the Environmental Consultant (SQEP), with a copy of an Environmental Incident report to the Project Manager, ORC and QLDC. Note: Monitoring will be increased to a daily basis until water quality parameters return to acceptable levels or as otherwise directed by ORC.

5.6 Water Quality Incidents

A water quality incident is considered to have occurred where the water quality performance criteria outlined in Section 5.2 is breached. The incident procedures outlined at Section 3.4 shall be followed.

6.0 DUST MANAGEMENT

Dust from construction activities, vehicle movements and stockpiles can contribute to sediment runoff as well as creating a nuisance to the public, neighbouring properties, adjoining roads and service infrastructure. The key risks associated with dust will be during the bulk earthworks.

There are a range of activities that may produce dust onsite including:

- General disturbance of soil (particularly during drier months).
- Mud-tracking onto surrounding roads.
- Stockpiling of topsoil or subsoil.
- Inadequate ground covers and stabilisation.
- Slow or ineffective revegetation procedures.

6.1 Sensitive Receptors

Key sensitive receptors to protect from the effects of dust include residential dwellings to the north, west and south-west. The nearest being 208 Lower Shotover Road that is 25 m west. As the site is located within the Rural General Wakatipu Rural Amenity Zone the number of sensitive receptors is limited.

The site is located within the Lower Shotover Basin and due to the surrounding topography and alpine environment, wind direction and speed can be changeable. Contractors shall remain vigilant for variations in wind conditions. The project shall ensure the site is prepared appropriately to manage potential dust effects.

6.2 Performance Criteria

The project must ensure that reasonable and practical measures are taken to avoid dust moving across the boundaries of the site at all times.

6.3 Management Measures

The following measures will be deployed to ensure dust generation onsite is minimised:

- Stage works where possible to minimise soil exposure timeframes.
- Revegetate disturbed areas progressively throughout construction.
- Dust suppression of disturbed work areas and stockpiles will be achieved primarily using k-lines. Ensure a consented water take permit is approved by the local authority. If taking water from lakes and or rivers, that only the permitted volume of water is taken.
- If dust activities cannot be controlled due to high winds, works will cease until favourable conditions return.
- Only designated access points are to be used.
- To avoid spillage risks, trucks will not be overloaded.
- All trucks must have tail gates up and swept or cleaned prior to entering external roads.
- Site access to be constructed in accordance with GD05 (detail at Section 4.3.1).
- All site access and surrounding roads to be swept clean regularly.

- Stockpile heights are to be minimised as much as possible (< two metres) unless they are covered (e.g. an erosion blanket, chemical sealant, temporary cover crop or mulched).
- Long-standing stockpiles (greater than six weeks) shall be appropriately stabilised to provide both wind and erosion protection.
- Within two weeks of completion, all earth worked areas will be sown out with grass, landscaped or otherwise stabilised by an appropriate erosion control.

6.4 Monitoring

Site staff will maintain continual vigilance for any increases in wind to ensure measures are deployed prior to dust crossing site boundaries. Weekly Environmental Inspections will also ensure that the management measures described above are sufficient and performing effectively.

6.5 Contingency Measures

The following contingency measures in **Table 8** shall be adopted if required.

Table 8: Dust contingency measures

Issue	Contingency Measure
Abatement notice issued by QLDC due to complaint about excessive dust emissions	Meet the requirements of the abatement notice by stopping dust-generating activity or reducing the dust generated within the time stated by the abatement notice. The notice will state the maximum penalty which will be applied should the conditions of the notice not be met within the specified time. Contact the Environmental Consultant (SQEP) immediately.
Excessive dust creation from excavation and/or clearing works	• Increase frequency of irrigation. • Deploy hose spraying of excavation areas and activities including bucket movement from excavation to truck. • Do not excavate during high winds, particularly if wind direction is likely to impact sensitive receivers.
Excessive dust creation from hauling operations	• Reduce truck speeds. • Cover loads causing dust impacts. • Clean dirty road surfaces
Excessive dust creation from stockpiles	• Spray stockpiles with water or water trucks. • Hydro-mulch, seed or stabilise stockpiles, cover stockpiles with plastic or geofabric where appropriate. • Locate stockpiles further away from sensitive receptors.

6.6 Dust Incident

A dust incident is considered to have occurred where:

- Dust clouds are observed crossing the boundary into sensitive receptors or,
- A justified complaint is received regarding dust emissions across the boundary of the site and on investigation is warranted.

The incident procedures outlined at Section 3.4 shall be followed.

7.0 NOISE AND VIBRATION MANAGEMENT

Noise and vibration generated during construction has the potential to impact sensitive receivers by reducing comfort, impeding communication, causing cosmetic damage to structures and damaging household possessions.

The following assessment and management measures are intended for standard construction equipment that is not expected to induce noise or vibration beyond the maximum limits in the QLDC District Plan. Where upper noise and vibration levels of district plans will be breached, an Acoustic Specialist may need to be engaged to assist with the management of these nuisance effects.

Potential noise and/or vibration effects may be generated by the following:

- Excavation and earth moving plant
- Bulldozers or site scrappers
- Light vehicles near sensitive receptors
- Ancillary plant and equipment
- Compaction equipment
- Reversing alarms/beepers

7.1 Sensitive Receptors

Key sensitive receptors to protect from the effects of noise and vibration include residential dwellings to the north, west and south-west. The nearest being 208 Lower Shotover Road that is 25 m west. As the site is located within the Rural General Wakatipu Rural Amenity Zone the number of sensitive receptors is limited.

No rock was encountered in the test pits excavated by GeoOtago in December 2022. Therefore, rock breaking is not anticipated for this project.

7.2 Performance Criteria

1. Construction activities shall meet relevant noise limits specified under Rule 36.5.13 of the Queenstown Lakes Proposed District Plan. This rule requires Construction sound at any point within the site must comply with the limits specified in Tables 2 and 3 of *NZS 6803:1999 Acoustics - Construction Noise*, when measured and assessed in accordance with that standard (see table below).
2. Construction activities shall meet relevant vibration limits specified under Rule 36.5.10 of the Queenstown Lakes Proposed District Plan. This rule requires vibration from any activity must not exceed the guideline values given in *DIN 4150-3:1999 Effects of vibration on structures* on any structures or buildings on any other site.

Table 9: Upper limits in dB(A) for construction work noise in residential areas for more than 20 weeks

Time of Week	Time Period	$L_{Aeq(t)}$	L_{Afmax}
Weekdays	0630 – 0730	55 dB	75 dB
	0730 – 1800	70 dB	85 dB
	1800 – 2000	65 dB	80 dB
Saturdays	0630 – 0730	45 dB	75 dB
	0730 – 1800	70 dB	85 dB

Table 10: Vibration Thresholds for Structural Damage (PPV mm/s)

	Short Term				Long-Term
	At Foundation			Uppermost Floor	Uppermost Floor
Types of Structures	0 to 10 HZ	10 to 50 Hz	50 to 100 HZ	All Frequencies	All Frequencies
Commercial/Industrial	20	20 to 40	40 to 50	40	10
Residential	5	5 to 15	15 to 20	15	5
Sensitive/Historic	3	3 to 8	8 to 10	8	2.5

Note: When a range of velocities is given, the limit increases linearly over the frequency range.

7.3 Management Measures

The following measures will be deployed to ensure noise and/or vibration associated with the Project are appropriately mitigated:

- Surrounding residents or sensitive receptors will be notified prior to commencing any particularly noisy or vibration inducing activities.
- Where practicable, select quieter equipment or use lower noise generating alternatives.
- Regularly service equipment to ensure plant is running optimally in accordance with process procedures.
- Plant and equipment to be used on the site will be fitted where appropriate with noise control or attenuation devices and maintained and operated in accordance with manufacturer's specifications to minimise noise emissions.

- Revving of engines in mobile or stationary machines will be limited. All plant and vehicles will be turned off when not in use and if safe to do so.
- The use of horns, bells, hooters, or other audible signals on mobile equipment will be limited, and two-way communication will be used.
- Undertake activities that may lead to noise or vibration effects, during reasonable and practical hours.

7.4 Monitoring

All earthworks activity will be closely monitored by the operator and the Contractor to ensure that noise and vibration remains within the required limits. If monitoring finds that the activity cannot comply with performance criteria, an acoustic engineer will be engaged to assess the project and provide appropriate mitigation measures and monitoring.

Weekly Environmental Inspections shall include an assessment of the site to determine the effectiveness of noise and vibration management controls.

7.5 Contingency Measures

The following contingency measures in **Table 11** shall be adopted if required.

Table 11: Noise and vibration contingency measures

Issue	Contingency Measure
Abatement notice issued by QLDC due to complaints about excessive vibration and/or noise	Meet the requirements of the abatement notice by stopping the noise and/or vibration or reducing the noise and/or vibration within the time stated by the abatement notice. The notice will state the maximum penalty which will be applied should the conditions of the notice not be met within the specified period. Contact the Environmental Consultant (SQEP) immediately who will advise if an Acoustic Specialist shall be engaged.
Noise and/or vibration complaint received from the public	Manage the complaint in accordance with the Environmental Complaints procedure in Section 3.6.
Exceedance of performance requirement criteria (i.e., *DIN 4150-3:1999 Effects of vibration on structures)*	The Environmental Consultant (SQEP), in consultation with the Environmental Representative, will investigate and implement actions to reduce noise and/or vibration levels to below criteria levels. The Environmental Consultant (SQEP) will record what actions were taken to investigate the complaint, document the outcome of those actions in their site diary and advise the Project Manager.

Issue	Contingency Measure
Ongoing noise and/or vibration issues	In situations where ongoing complaints are received and despite the site staff's best intentions the noise cannot be consistently kept within the performance criteria, an Acoustic Specialist will be engaged to assist. This will be at the discretion of the Project Manager.

7.6 Noise and Vibration Incident

A noise and/or vibration incident is considered to have occurred when a complaint is received and on investigation is warranted where it exceeds performance criteria.

The environmental incident procedures outlined in Section 3.4 shall be followed.

8.0 CULTURAL HERITAGE MANAGEMENT

The loss or damage of cultural heritage items could be caused by construction activities. The damage or loss of artefacts can lead to the loss of culturally or historically significant items and information.

Examples of cultural heritage items include:

- Koiwi tangata (human skeletal remains).
- Waahi taoka (resources of importance).
- Waahi tapu (places or features of special significance).
- Māori artefact material.
- Feature or archaeological material predating 1900.
- Heritage material.
- Unidentified archaeological or heritage site.

8.1 Location of Known Cultural Heritage Significance

A search of QLDC's database indicates there are no known items of cultural or heritage significance on the site.

8.2 Performance Criteria

- The protection of cultural heritage artefacts and places in accordance with the Heritage New Zealand Pouhere Taonga Act, 2014.
- Strict adherence to Heritage New Zealand's Archaeological Discovery Protocol (attached as **Appendix 10**) in the case of unexpected finds.

8.3 Management Measures

As discussed above, a search of the Council's database indicates there are no known items of cultural heritage significance on the site. However, an item of significance could still be unexpectedly found during ground-disturbing activities. All works on this Project will be undertaken in accordance with the obligations of the *Heritage New Zealand Pouhere Taonga Act*, 2014 (HNZPTA).

8.4 Monitoring

Weekly inspections shall include a visual assessment of the site to ensure that no new significant artefacts have been encountered. However, operators must remain vigilant for such encounters as they occur.

8.5 Accidental Finds

If any unknown artefacts are uncovered, the Project will work to Heritage New Zealand's Archaeological Discovery Protocol (attached as **Appendix 10**).

9.0 CHEMICALS AND FUELS MANAGEMENT

Hazardous substances can be extremely dangerous to both human health and the environment. Used incorrectly they can cause catastrophic accidents, such as fires and explosions, and serious harm to people who are exposed to them.

9.1 Sensitive Receptors

Key sensitive environmental receptors include staff members working on the site and neighbouring properties.

9.2 Performance Criteria

- Chemicals and fuels are stored and used so not to cause contamination of works areas and surrounding environment.
- All spills are cleaned up immediately and the contaminated soils/waters disposed of appropriately.

9.3 Management Measures

The following measures will be deployed to ensure chemicals and fuels associated with the Project are appropriately mitigated.

- All hazardous substances on site will be stored, transported and used according to the safety data sheet requirements.
- Storage shall be greater than 30 metres from waterways and concentrated flows.
- Refuelling of vehicles and plant on site will occur in the designated refuelling bay.
- All concrete washing is to be undertaken in the designated concrete wash-out pit.
- One 120 L Oil and Hydrocarbon spill kit will be located in the laydown area.
- The volumes of the hazardous substances listed in **Table 12** will not be exceeded.

Table 12: Maximum volumes of chemicals and fuels

Chemicals and Fuels	Maximum Volume	Storage Location
Diesel	500 L	Fuel tank
Unleaded Fuel	60 L	Jerry cans in lockable container
Oil	10 L	Packaging in lockable container
Lubricant (WD40 or similar)	Six Cans	Packaging in lockable container
Grease	5 L	Packaging in lockable container
Spot marking paint	2 L	Packaging in lockable container

9.4 Monitoring

Weekly Environmental Inspections shall include a visual assessment of the site to determine the effectiveness of chemicals and fuels management controls.

9.5 Contingency Measures

The following contingency measures in **Table 13** shall be adopted if required.

Table 13: Chemicals and fuels contingency measures

Issue	Contingency Measure
Spills response	• Stop works in proximity to the spill and access the safety of all personnel. • Take immediate action to contain the spill and prevent it spreading or discharging into stormwater drains or natural waterways. • Use the spill kit to contain and treat the spill. • Notify Environmental Consultant. • If necessary, notify the Regional Council spill response unit. • Remove contaminated material to a suitable contained location for remediation/disposal (require any necessary approvals/permits from ORC). • Document spill on the Environment Incident report. • The spill kits shall be replaced by an approved supplier.
Inappropriate storage	• Upgrade facility. • Clean-up of storage area. • Notify and train staff.
Inappropriate handling/transport	• Notify and train staff through toolbox meetings on the appropriate handling and transport methods.
Inadequate spill kit materials	• Order more materials. • Investigate types of chemicals on site and consult a supplier for advice on appropriate equipment • Develop or revise spill material monitoring and ordering system
Inappropriate disposal of chemicals or fuels	• Provide appropriate disposal facilities or service providers. • Notify and train staff.
Inaccurate or insufficient records	• Advise staff and update records. • Monitor through inspections.

9.6 Chemicals and Fuels Incident

A chemicals and fuels incident is considered to have occurred where:

- A spill more than five litres has occurred.
- A situation is discovered where a spill of more than five litres would likely have occurred before it happens where the management measures listed above have not been followed.

The environmental incident procedures outlined at Section 3.4 shall be followed.

10.0 WASTE MANAGEMENT

Waste from construction activities can contribute to environmental effects as well as creating a nuisance to the public, neighbouring properties, and flora and fauna. Measures to minimise and manage waste are therefore key considerations throughout project delivery.

10.1 Sensitive Receptors

Key sensitive environmental receptors include staff members working on the site and neighbouring properties.

10.2 Performance Criteria

- Non-recyclable waste generation is minimised, and the site and surrounding area are kept free from waste at all times.
- Wastes shall be stored safely and in an organised manner until recycling, reuse, or disposal.
- Where possible, materials shall be reused on site or made available for reuse for another purpose or project off-site.

10.3 Management Measures

The following measures will be deployed to ensure waste management associated with the Project is appropriately mitigated:

- The Waste Management Hierarchy philosophy will be implemented onsite throughout the life of the Project, as illustrated in **Figure 5**.
- Throughout construction, measures will be implemented to ensure the site is maintained in a safe, clean and tidy state.
- Where possible, waste shall be segregated into labelled bins with lids: General, Hazardous and Recyclables.
- Wastes on site shall be suitably contained and prevented from escaping off site. The waste is to be contained so it doesn't contaminate soil, surface or ground water, create unpleasant odours or attract vermin.
- Any material dropped in or adjacent to open drains shall be recovered immediately after it occurs.
- Waste storage is not permitted in or near drainage paths.
- The burning of waste is strictly prohibited.
- No wastes shall be disposed of on site.
- Wastes shall be removed from site regularly and at completion of works.

Figure 5: The Waste Hierarchy

10.4 Monitoring

Site staff will be briefed on waste processes prior to works commencing and shall maintain continual vigilance for excess waste around the site and following appropriate disposal procedures.

Weekly Environmental Inspections shall include a visual assessment of the site to determine the effectiveness of waste management controls.

10.5 Contingency Measures

The following contingency measures in **Table 14** shall be adopted if required.

Table 14: Waste contingency measures

Issue	Contingency Measure
Waste items accumulating or stockpiled	• Arrange for collection by approved licensed contractor. • Provide additional bins with lids if available. • Remove offsite as soon as possible.

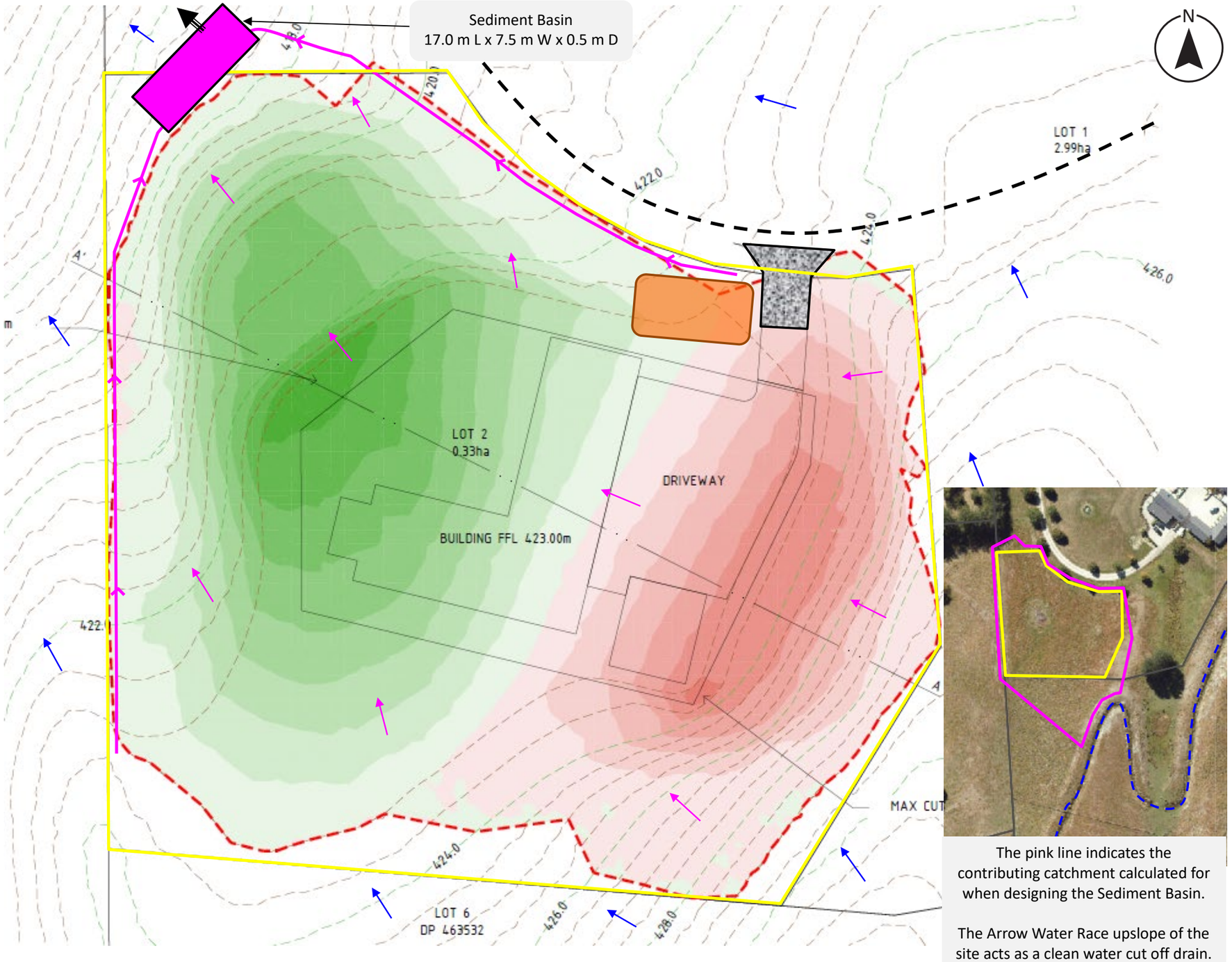
10.6 Waste Incident

A waste incident is considered to have occurred where:

- Waste is not contained within the project area during construction or,
- A complaint is received regarding inappropriate management of waste and on investigation is warranted.

The environmental incident procedures outlined at Section 3.4 shall be followed.

APPENDIX 1 Erosion and Sediment Control Plan Drawing



The pink line indicates the contributing catchment calculated for when designing the Sediment Basin.

The Arrow Water Race upslope of the site acts as a clean water cut off drain.

Legend

	Stabilised access
	Clean water overland flow
	Dirty water overland flow
	Dirty water diversion channel
	Laydown area
	Sediment Basin
	Emergency spillway
	Existing metalled driveway
	Lot boundary
	Arrow Water Race
	Sediment Basin contributing catchment

Notes

1. This plan is to be read in conjunction with the Environmental Management Plan document prepared by Enviroscope.
2. All locations of erosion and sediment control (ESC) devices are indicative and exact placement to be confirmed onsite.
3. ESC devices to be installed and maintained in accordance with Auckland Council's 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05) and manufacturer's instructions where relevant.
4. All devices are to be inspected daily and pre and post-rain event to ensure they are fully functional.

enviroscope

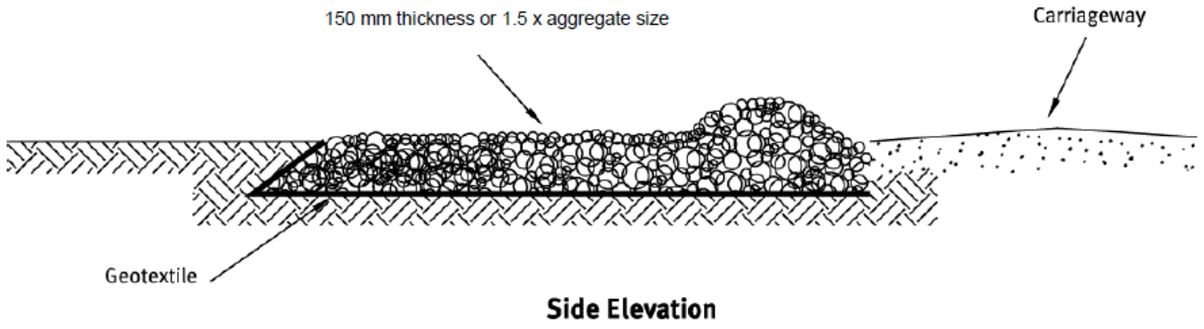
Project: 208A Lower Shotover Road

Description: Erosion and Sediment Control Plan Drawing

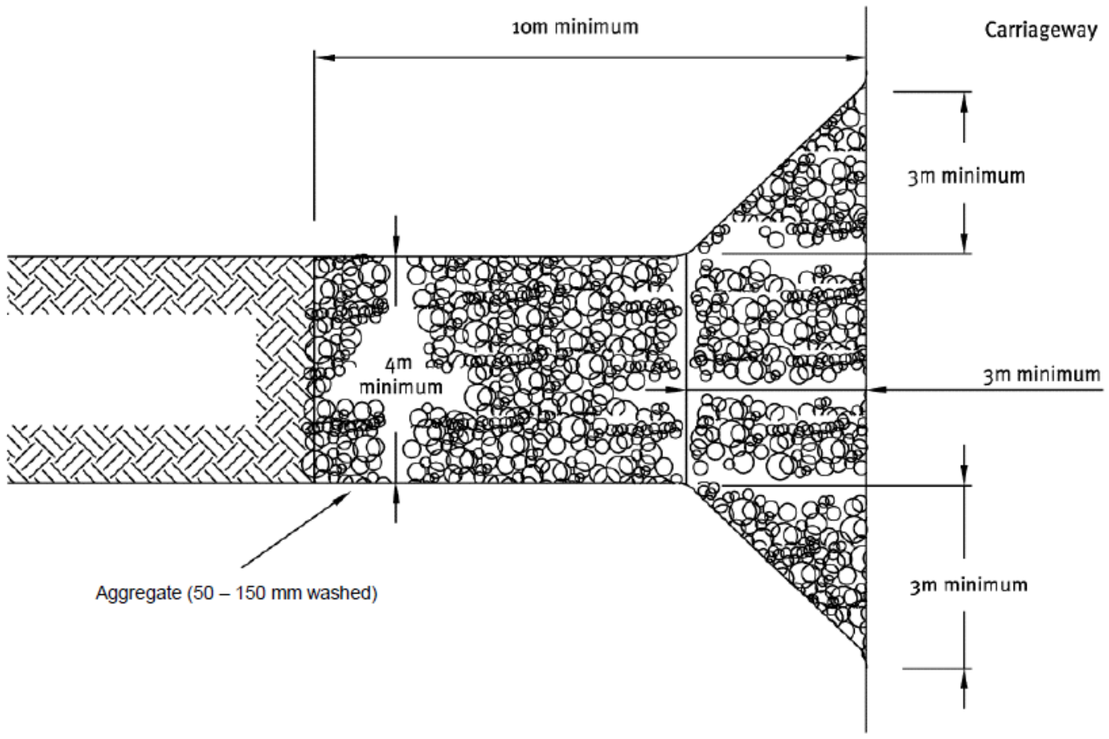
Drawn	Approved	Date	Drawing No.	Revision
CD	QM	31/03/2023	ECSP - 001	B

STABALISED ACCESS

(Page 60 from GD05)



Side Elevation



Plan View

Design Parameter	Specification
Aggregate size	50-150 mm washed aggregate
Minimum thickness	150 mm
Minimum length	10 m
Minimum width	4 m

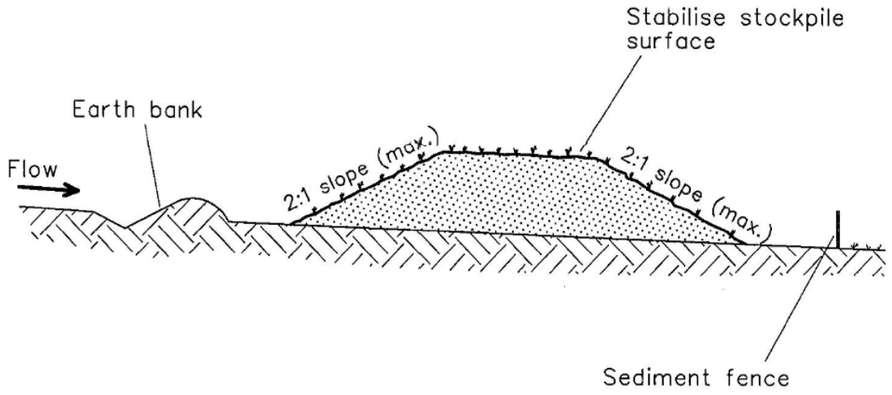
- Additional aggregate may need to be added to the stabilised entranceway throughout the project to maintain the thickness.
- Any sediment that has been tracked onto the surrounding roads must be swept away at regular intervals.

Project: 208A Lower Shotover Road

Description: Erosion and Sediment Control Plan - Schematics

Drawn	Approved	Date	Drawing No.	Revision
CD	QM	31/03/2023	ECSP - 002	B

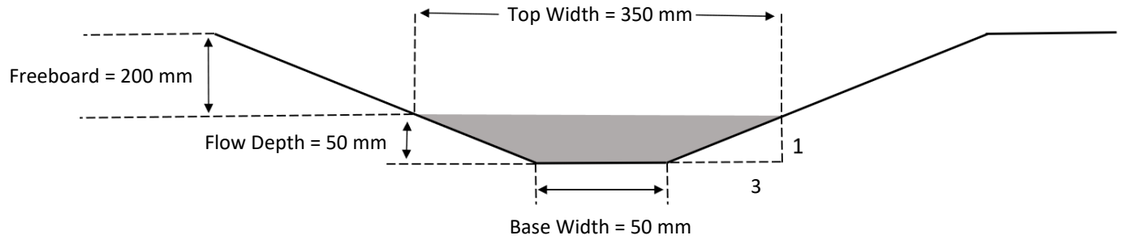
TEMPORARY STOCKPILES



- Temporary stockpiles should be a maximum height of two metres to mitigate wind effects and to preserve the quality of the topsoil as future planting media for revegetation.
- If the stockpile is to be left insitu for a period of 12 weeks or more it shall be seeded with grass or erosion control matting to provide erosion and dust protection.
- A silt fence should be installed on the downslope of the stockpile.

STANDARD DIRTY WATER DIVERSION CHANNEL

(Pages 43-46 from GD05)



- This has been designed to comfortably carry a 5% AEP design event.
- Trapezoidal shape
- Full calculations are included in **Appendix 2**.

Base Width	Top Width	Flow Depth	Freeboard Height	Batter ratio	Channel slope
50 mm	350 mm	50 mm	200 mm	3:1	10%

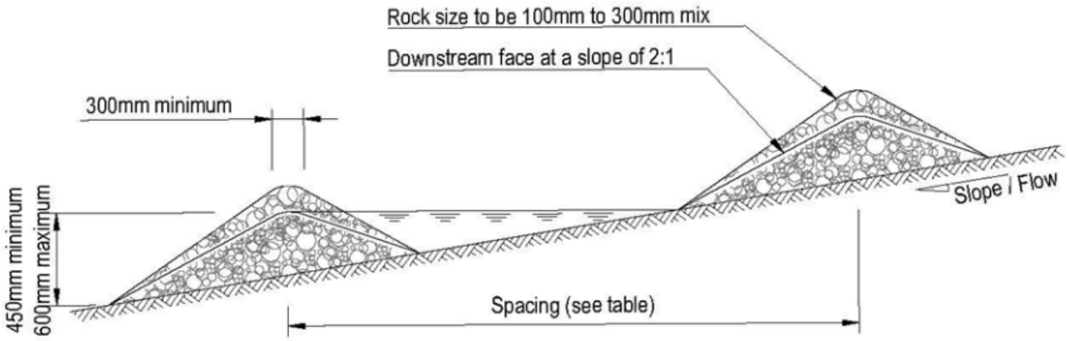
Project: 208A Lower Shotover Road

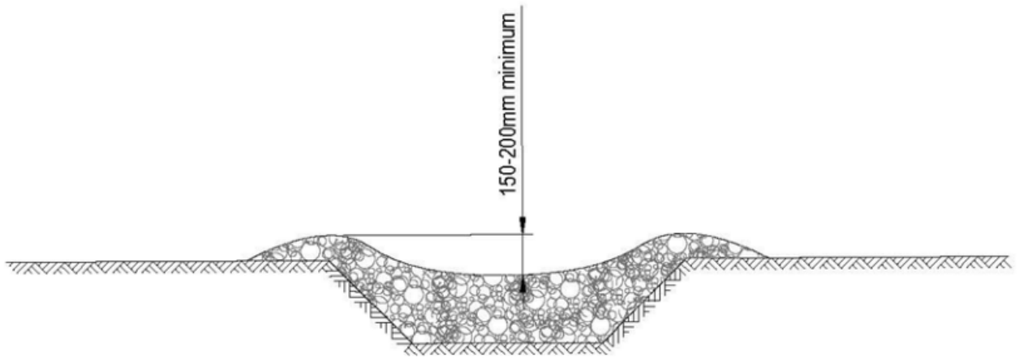
Description: Erosion and Sediment Control Plan - Schematics

Drawn	Approved	Date	Drawing Number	Revision
CD	QM	31/03/2023	ECSP - 003	B

CHECK DAMS

(Page 50-54 from GD05)





Slope of site (%)	Spacing (m) of dams with a 450 mm centre height	Spacing (m) of dams with a 600 mm centre height
Less than 2%	24	30
2- 4%	12	15
4- 7%	8	11
7- 10%	5	6
Greater than 10%	Unsuitable – use stabilised channel or specific engineered design	Unsuitable – use stabilised channel or specific engineered design

- Check dams will be constructed out of 100 – 300 mm mix rock or sandbags.
- The centre should be 50-100 mm lower than the outside edges to form a spillway.
- Check dams should be placed every five metres as per the table above.

enviroscope

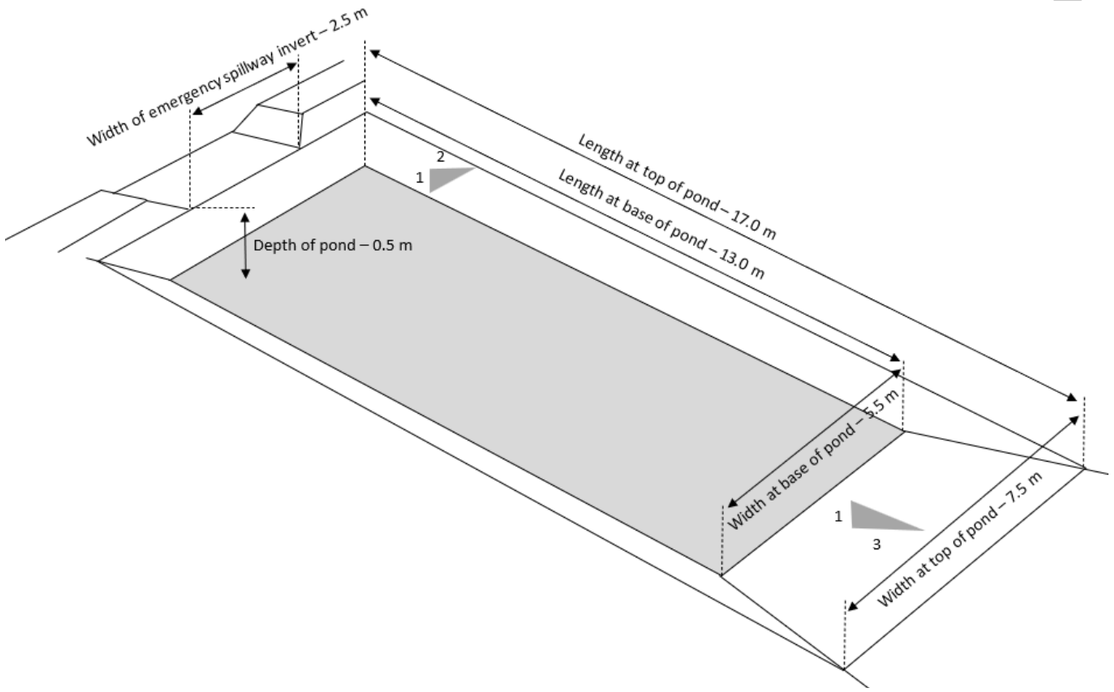
Project:

Description: Erosion and Sediment Control Plan - Schematics

Drawn	Approved	Date	Drawing Number	Revision
CD	QM	31/03/2023	ECSP - 004	B

SEDIMENT BASIN

Type D Sediment Basin from IECA, Image from Enviroscope



- To be mucked out once 20% capacity reached.
- Sizing and calculations in **Appendix 2**.

enviroscope	**Project:** 208A Lower Shotover Road **Description:** Erosion and Sediment Control Plan - Schematics				
	Drawn	**Approved**	**Date**	**Drawing Number**	**Revision**
	CD	QM	31/03/2023	ECSP - 005	B

REFUELING BAY

- Locate the hardstand as far as practicably possible from waterways and concentrated flows.
- Ensure spill kit is located nearby.

SPILL KITS

- One 120 L Oil and Hydrocarbon spill kit will be located in the laydown area.

CONCRETE WASHOUT PIT

- The concrete wash out pit consists of a plastic-lined bunded pit constructed with fill or straw bales.
- After concrete washout any water shall be left to evaporate.
- Cured concrete is to be disposed of within the plastic sheet to a licensed facility.

WASTE

- Where possible, waste shall be segregated into labelled bins.
- Wastes on site will be suitably contained and prevented from escaping off site. This may include covering skip bins during high winds.
- Waste storage is not permitted in or near drainage paths.
- Wastes will be removed from site when bin is full.

enviroscope

Project: 208A Lower Shotover Road

Description: Erosion and Sediment Control Plan - Schematics

Drawn	Approved	Date	Drawing Number	Revision
CD	QM	31/03/2023	ECSP - 006	B

APPENDIX 2 Calculations for Erosion and Sediment Controls

DIVERSION CHANNEL CALCULATIONS - 208A Lower Shotover Road - REVISION B - 31.03.2023

Specifications	Value 1	Value 2	Units	Reference/Notes
Site Details				
Contributing catchment		0.19	ha	QLDC GIS + Google Earth
Design rainfall event		0.05	AEP	5% AEP as required by GD05
Time of Concentration				
Overland sheet flow path length (L)		96	m	Google Earth
Hortons roughness value (n)		0.012		
Slope of surface (S)		12.5	%	
Time of Concentration (Tc)		2.9	minutes	
Rounded Tc to allign with HIRDS		10	minutes	10 minute minimum required if Tc <10
Rational Method: Q = (C*I*A)/360				
Area ground cover	Grass	Bare soil		
Proportion of catchment	0.2	0.8		
Runoff coefficent (C)	0.4	0.8		Mannings Rounghness Coefficent (n)
Rainfall intensity (I)	40.4	40.4	mm	NIWA HIRDS, 10 min (Tc), 5% AEP
Catchment Area (A)	0.04	0.15	ha	
Qp (Peak runoff flow)	0.0017	0.0136	m3/s	Rational Method: Q = CIA
Total Qp (Peak runoff flow)		0.0154		
Channel Design				Mannings Formula Uniform Trapezoidal Channel Flow
Bottom Width		50	mm	
Batter ratio= 1 to		3	ratio	
Manning's roughness coefficient of channel (n)		0.018		Gravelly earth channel
Channel slope		10	%	Slope=rise/run
Flow depth		50	mm	
Channel depth		250	mm	200mm freeboard selected rather than 300mm as per GD05 to reflect the significantly less intensive rain in Central Otago (approx 50% as intense as Auckland)
Flow (Q)		0.0159	m3/s	
Buffer		4	%	
Top width		350	mm	
Additional Controls				
Drop out pit		No		
Check dams		No		
Geofabric lining		No		

SEDIMENT BASIN CALCULATIONS - 208A Lower Shotover Road - REVISION A - 20.02.2023

Specification	Value5	Units	Source / Notes / Reference
Site details			
Contributing catchment	0.45	ha	QLDC GIS
Project duration	0.5	years	
Design Storm Event	1-hr, 5% AEP		
Rainfall Depth for Design Event	19.1	mm	
Sizing requirements with run off coefficent of 1.0			
Volume	85.95	m3	Volume produced is likely to be less as run off coefficent should be less than one during earthworks.
Sediment Basin Design Specifications			
Required volume	85.95	m3	
Top length (A)	17.00	m	
Top width (B)	7.50	m	
Base length (a)	13.00	m	
Base width (b)	5.50	m	
Depth (h)	0.50	m	Test pit 1 at 1 m depth is glacial deposits with sandy gravel.
Internal batter ratio= 1 to	2	ratio	Inlet batter is 1:3
Actual volume (v)	49.08	m3	
Width to length ratio	2.3:1	ratio	
External batter ratio= 1 to	2	ratio	
Soakage			
Duration of design event	1	hour	
Soakage rate	601	mm/hr	GeoOtago December 2022
Soakage depth for design event	0.601	m	Depth = Soakage rate*Length of design rain event
Soakage volume for design event	42.97	m3	Volume = Base width * base length * soakage depth for design event
Actual volume including soakage	92.05	m3	
Buffer	7.10%		

APPENDIX 3 Environmental Site Induction Handout

ENVIRONMENTAL INDUCTION HANDOUT

Key Roles and Responsibilities

Role	Responsibilities
Project Manager	The Project Manager is responsible for the effective implementation of the EMP and overall responsibility for the environmental performance of the project. • Ensuring adequate resources are in place to implement the EMP. • Ensuring that project objectives and targets are achieved in accordance with the relevant EMP. • Ensuring Project Managers, Employees and Sub-Contractors operate within the guidelines of the EMP. • Ensuring that an EMP is prepared and that environmental standards, processes and procedures meet relevant resource consent conditions. • Overseeing the successful implementation, monitoring and review of the EMP. • Providing reporting of environmental incidents to the QLDC and other periodic environmental reports to QLDC as required by the EMP Guidelines. • Ensuring that inspections and audits are carried out in accordance with the relevant EMP. • Restrict or stop any activity on the Project that has the potential to or has caused environmental effects. • Delegate authority of the above responsibilities.
Environmental Representative	The Environmental Representative is accountable to the Project Manager and supports the Project Manager in the day-to-day implementation of the EMP. • Ensure installation of environmental controls as per the EMP. • Undertake environmental site inspections of the project including weekly inspections of controls. • Oversee the maintenance and improvement of defective environmental controls. • Keep project leadership informed of the environmental performance of the project. • Inform staff of procedures and constraints applicable to managing specific environmental issues. • Responsible for providing environmental inductions to all staff and sub-contractors. • Assist the project leadership in attending to Environmental Incidents and Complaints. • The Environmental Representative shall be familiar with: - Environmental aspects of the project. - Environmental Management Plan. - Best practice erosion and sediment control from: ○ *Guidance Document 2016/005: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region* (GD05)

Role	Responsibilities
All staff and sub-contractors	All Project staff have responsibility for their environmental performance and the impact they have on Project environmental performance. All subcontractor personnel are considered equivalent to staff personnel. All staff are required to: • Undertake all activities in accordance with the requirements of the EMP. • Ensure they are aware of the contact person related to environmental matters. • Report to the Environmental Representative, any activity that has the potential to or has resulted in an Environmental Incident.

Key Environmental Locations

Key sensitive receptors include residential dwellings to the north, west and south-west. The nearest being 208 Lower Shotover Road that is 25 m west. As the site is located within the Rural General Wakatipu Rural Amenity Zone the number of sensitive receptors is limited.

Key Resource Consent Conditions

TBC.

Limits of Clearing and Importance of Sequencing

The sequencing of works is a key component to ensure that environmental effects of construction are appropriately managed. It is imperative that the sequencing outlined in Section 2.1 of the EMP is followed so that the site is stabilised in the most efficient manner.

All staff should be familiar with this sequence. Any potential changes to that sequence need to be approved by the Site Supervisor which will be discussed first with the Environmental Consultant.

Key Environmental Management Measures in EMP

Erosion and Sediment Control (Section 4 of EMP)

- Direction provided in Erosion and Sediment Control Plan (ESCP) in Appendix 1 of EMP.
- Separation of clean and dirty water is the most important principle to ensure that the contributing catchment of dirty water that needs to be treated is as small as possible.
- Progressive stabilisation (revegetation) of disturbed areas will ensure that the extent and duration of exposed soil is minimised. Keep it covered!
- All controls to be checked immediately before storm events to ensure they are in good-working order.
- Erosion and sediment control devices to remain in place until site is stabilised (defined as 80% vegetative cover).

Any works that disturb the controls outlined on the ESCP must be reinstated before moving to the next task.

Water Quality Management (Section 5 of EMP)

- Any water caught in the sediment devices to be re-used in dust suppression where possible and if required.
- Any observations of dirty water running offsite to be reported directly to the Site Supervisor.

Dust Management (Section 6 of EMP)

- Dust suppression should occur on any exposed soil on unsealed roads, this can be done using the water caught in the retention basin.
- Avoid all unnecessary vegetation clearing that exposes soil and work should be conducted in stages as this can increase the impact from dust in the event of strong winds.
- During high wind events and dust suppression is becoming difficult works must cease until more favourable weather conditions.
- Constant vigilance should be maintained onsite to ensure that dust is appropriately managed and weekly monitoring should be completed to ensure that management measures are effective.

Noise and Vibration Management (Section 7 of EMP)

- Noise producing works only be undertaken during the hours of 0730-1800 from Monday-Saturday and no works to be completed on Sundays or public holidays.
- Particularly noisy work should be completed during the middle of the day during business hours.
- Noise dampening should occur when possible.
- Weekly site inspections should be undertaken by the Environmental Representative to ensure the strategies in place are effective.

Historic Heritage Management (Section 8 of EMP)

- If any artefacts are found works must stop within 20 meters of the discovery and the site manager notified immediately.
- The site manager must then secure the area and notify the Heritage New Zealand Regional Archaeologist, who will advise when works can begin again.

Chemicals and Fuel Management (Section 9 of EMP)

- Chemicals and fuels are stored and used so not to cause contamination of works areas and surrounding environment.

Waste Management (Section 10 of EMP)

- Waste management on site will ensure wastes are stored safely and in an organised manner until recycling, reuse or disposal.

Environmental Incidents

The procedure for managing environmental incidents is outlined in Section 3.4 of the EMP, however these can be summarised as follows:

- Environmental incidents must be reported as soon as they occur, and the Project team must respond immediately to mitigate further environmental impacts.

- Investigation into the cause of the incident should be completed and a solution should be constructed to remediate the Environmental damage.
- The Project Manager must then notify the QLDC and/or the ORC of the details of the incident within 12 hours of being made aware of the incident.

Rapid Response for Storm Events

The procedure for rapid response to storm events is outlined in Section 4.5 of the EMP, however these can be summarised as follows:

- The Site Supervisor will observe and understand the **weather forecast** throughout the project to ensure appropriate preparation onsite.
- If a **significant storm** event is forecast all works should stop within an appropriate amount of time to inspect ESC devices and undertake any maintenance or site stabilisation required.
- The sediment controls should be in operating condition and fully functional.
- During the storm event the site should be monitored to sure the functioning of the ESC devices and maintained if required.

When storms are forecast it is crucial that tools are downed in time for the rapid response procedure to be implemented. This will help avoid environmental incidents, potential enforcement action and site shutdown.

APPENDIX 4 Site Induction Register

208A Lower Shotover Road

ENVIRONMENTAL INDUCTION REGISTER

Name	Organisation	Date Inducted	Induction Delivered by	Signature

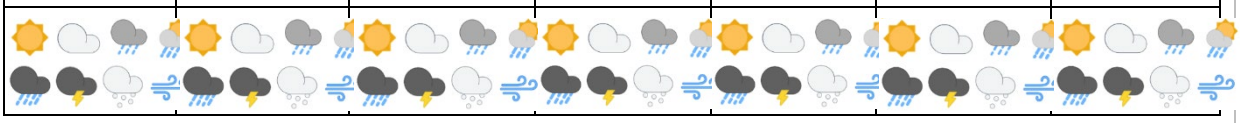
APPENDIX 5 Weekly Environmental Site Inspection Proforma

208A Lower Shotover Road

WEEKLY SITE INSPECTION

Environmental Representative: Date:

Item	Yes	No	Comment
General			
Is the EMP available onsite?	☐	☐	
Have any environmental incidents occurred during the week? If so, provide details	☐	☐	*If yes, complete environmental incident report.
Complete description of weather for upcoming week – circle applicable			

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						

Are there any rain events forecasted for the coming week?	☐	☐	
Have pre rain event inspections been completed?	☐	☐	
Have post rain event inspections been completed?	☐	☐	
Water Quality			
Is water quality monitoring occurring when water is flowing across the site boundaries?	☐	☐	*If yes, complete water quality monitoring form
Is there visual evidence of sediment from the construction site entering waterways/drainage lines?	☐	☐	
Does water in sediment retention devices meet water quality criteria before being discharged?	☐	☐	
Erosion and Sediment Control			
Are works contained within the site boundaries?	☐	☐	
Are completed areas being progressively stabilised?	☐	☐	
Is there any new evidence of erosion?	☐	☐	
Are erosion and sediment controls installed as per the ESCP?	☐	☐	
Is dirty water entering dirty water diversion channels during rain events?	☐	☐	
Do sediment controls have over 80% capacity?	☐	☐	

208A Lower Shotover Road

Item	Yes	No	Comment
Cultural Heritage			
Have any finds of cultural significance been found throughout the week?	☐	☐	
Noise and Vibration			
Have any complaints been received during the week?	☐	☐	*If yes, complete Complaints Register
Are nearby sensitive receptors being notified before significant noise and/or vibration causing activities?	☐	☐	
Are works only occurring within the hours of operation?	☐	☐	
Dust			
Have any complaints been received during the week?	☐	☐	*If yes, complete Complaints Register
Have completed areas been revegetated or stabilised?	☐	☐	
Is dust suppression of disturbed work areas and stockpiles occurring?	☐	☐	
Are works ceasing during high winds?	☐	☐	
Is the site access and surrounding roads swept clean of sediment?	☐	☐	
Chemicals and Fuels			
Are all hazardous substances on site stored, transported and used according to the safety data sheet requirements?	☐	☐	
Is refuelling of vehicles and plant on site will occur in the designated refuelling bay or laydown area?	☐	☐	
Is concrete washing being undertaken in the designated concrete wash-out pit or at an approved off site facility?	☐	☐	
Is there an adequate supply of spill kits onsite? Have any used materials been replaced?	☐	☐	
Waste			
Is the site in a safe, clean and tidy state?	☐	☐	
Are wastes segregated into labelled bins with lids?	☐	☐	
Are skip bins not overfilled?	☐	☐	

Item	Yes	No	Comment
Is waste removed from open drains and drainage paths?	☐	☐	

Actions resulting from this inspection must be forwarded to the Project Manager any actions should be recorded in the Non-Conformance Register – Appendix 8.

Additional Comments:

Names and Signatures of inspection attendees:

APPENDIX 6 Environmental Incident Report Proforma

208A Lower Shotover Road

ENVIRONMENTAL INCIDENT REPORT FORM

Project Address: 208A Lower Shotover Road	**Consent Number: TBC**
Brief Project Description: Earthworks to form landscaping mounds, a building platform and driveway.	

Instructions- Complete this form for all environmental incident that cause contaminants (including sediment) or environmental nuisance to leave the site. Be succinct, stick to known facts and do not make assumptions. Once completed submit to the Regulatory team at Queenstown Lakes District Council at RCMonitoring@qldc.govt.nz. Call the Regulatory team immediately on 03 441 0499 for any serious or ongoing incidents that cannot be brought under immediate control.

Date and Time	Date: XX/XX/XXX Time: XX:XX hours
Description? Provide a brief and factual description of what happened during the incident, include relevant details such as: - The activity being undertaken when the incident occurred - The estimated distance to nearest waterway (include stormwater and dry courses) - The estimated distance to the nearest sensitive receiver Sketches/diagrams/photos may be referenced and appended to this report to aid in the description of the incident.	
Exact Location of the incident? Include address, landmarks, features, nearest tree, etc. Maps and plans can be attached.	
Quantity or volume of material escaped or causing incident? (provide and estimate quantity)	
Who identified the incident?	Contractor ☐ Council ☐ Community ☐ Other ☐

What immediate actions/control measures were taken to rectify or contain the incident?
What initial corrective action will be taken to prevent similar incidents recurring in the near future?
Has the Otago Regional Council been notified? Yes ☐ No ☐ Will be notified ☐

Environmental Representative/person making report:	
Name……	Signature……
Organisation……	Date……
Mobile phone number……	
Project Manager:	
Name……	Signature……
Organisation……	Date……
Mobile phone number……	

APPENDIX 7 Environmental Complaints Register

208A Lower Shotover Road

COMPLAINTS REGISTER

Complaint #	Date and Time Received	Complainant details (name, address, phone number)	Details of Complaint	Investigation and Findings	Outcome	Close out Date

APPENDIX 8 EMP Non-Conformance Register

208A Lower Shotover Road

NON-CONFORMANCE REGISTER

Ref Number	Date Observed	Found via (e.g. inspection, monitoring, complaint?)	Details of Non-conformance	Corrective Actions	Updated by	Close out Date

APPENDIX 9 Water Quality Monitoring Results Proforma

208A Lower Shotover Road

WATER QUALITY MONITORING FORM

Date		Monitoring Trigger		Location Description	
			Yes	No	Measurement
Is turbidity less than 100 NTU?*			☐	☐	____ NTU
Are total suspended solids less than 50 mg/L?*			☐	☐	____ mg/L
Are hydrocarbons visible?			☐	☐	
Are tannins visible in the water?			☐	☐	
Is there any waste in the water?			☐	☐	
Description of any non-conformance and actions required: •					
Include images of sampling location:					

*Enviroscope can provide Water Quality Monitoring services to measure turbidity. If 100 NTU is exceeded, collect a water sample to send to laboratory for TSS measurement.

APPENDIX 10 Archaeological Discovery Protocol

HERITAGE NEW ZEALAND
POUHERE TAONGA

Heritage New Zealand Pouhere Taonga Archaeological Discovery Protocol

Under the Heritage New Zealand Pouhere Taonga Act (2014) an archaeological site is defined as any place in New Zealand that was associated with human activity that occurred before 1900 and provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand. For pre-contact Maori sites this evidence may be in the form of bones, shells, charcoal, stones etc. In later sites of European/Chinese origin, artefacts such as bottle glass, crockery etc. may be found, or evidence of old foundations, wells, drains or similar structures. Burials/koiwi tangata may be found from any historic period.

In the event that an unidentified archaeological site is located during works, the following applies;

1. Work shall cease immediately at that place and within 20m around the site.

2. The contractor must shut down all machinery, secure the area, and advise the Site Manager.

3. The Site Manager shall secure the site and notify the Heritage New Zealand Regional Archaeologist. Further assessment by an archaeologist may be required.

4 If the site is of Maori origin, the Site Manager shall notify the Heritage New Zealand Regional Archaeologist and the appropriate iwi groups or kaitiaki representative of the discovery and ensure site access to enable appropriate cultural procedures and tikanga to be undertaken, as long as all statutory requirements under legislation are met (*Heritage New Zealand Pouhere Taonga Act*, *Protected Objects Act*).

5. If human remains (koiwi tangata) are uncovered the Site Manager shall advise the Heritage New Zealand Regional Archaeologist, NZ Police and the appropriate iwi groups or kaitiaki representative and the above process under 4 shall apply. Remains are not to be moved until such time as iwi and Heritage New Zealand have responded.

6. Works affecting the archaeological site and any human remains (koiwi tangata) shall not resume until Heritage New Zealand gives written approval for work to continue. Further assessment by an archaeologist may be required.

7. Where iwi so request, any information recorded as the result of the find such as a description of location and content, is to be provided for their records.

8. Heritage New Zealand will determine if an archaeological authority under the *Heritage New Zealand Pouhere Taonga Act* 2014 is required for works to continue.

It is an offence under S87 of the *Heritage New Zealand Pouhere Taonga Act 2014* to modify or destroy an archaeological site without an authority from Heritage New Zealand irrespective of

whether the works are permitted or a consent has been issued under the Resource Management Act.

Heritage New Zealand Regional archaeologist contact details:

Dr Matthew Schmidt
Regional Archaeologist Otago/Southland
Heritage New Zealand
PO Box 5467
Dunedin
Ph. +64 3 470 2364, mobile 027 240 8715
Fax. +64 3 4773893
mschmidt@heritage.org.nz